



AS-000191

CSL

000191

RB-0406

FOR CONSULTATION ONLY

A
PRIMER OF INDIAN LOGIC

MEHARCHAND LACHHAMANDAS,
SANSKRIT AND HINDI BOOK-SELLERS
Jain Street, Said Butha, LALORE.



FOR CONSULTATION ONLY **CSL**²
A Primer of Indian Logic

ACCORDING TO

ANNAMBHAṬṬA'S TARKASAMGRAHA

BY

MAHAMAHO PADHYAYA VIDYAVACASPATI

S. KUPPUSWAMI SASTRI, M.A., I.E.S.,

PROFESSOR OF SANSKRIT AND COMPARATIVE PHILOLOGY,
PRESIDENCY COLLEGE

AND

CURATOR, GOVERNMENT ORIENTAL MANUSCRIPTS LIBRARY, MADRAS



P. VARADACHARY & CO.
8, LINGA CHETTY STREET, MADRAS.

1932



CSL

1660

164
Knp N32 P

PRINTED AT
THE MADRAS LAW JOURNAL PRESS,
MAYLAPORE, MADRAS.

C

✓ 18143
Ann-P

18143
Knp-P

20 JAN 1964

TABLE OF TRANSLITERATION.

—	Consonants.	Aspirate, semi-vowels, sibilants, anusvāra and visarga.	Vowels.	Diphthongs.
Gutturals ...	क k, ख kh, ग g, घ gh, ङ ṅ	ह h	अ a, आ ā	} एe, ऐ ai
Palatals ...	च c, छ ch, ज j, झ jh, ञ ñ	य y, श ś	इ i, ई ī	
Linguals ...	ट t, ठ th, ड d, ढ dh, ण ṇ	र r, ण ṣ	ऋ ṛ, ॠ ṝ	}
Dentals ...	त t, थ th, द d, ध dh, न n	ल l, स s	लृ l̥	
Labials ...	प p, फ ph, ब b, भ bh, म m	व v	उ u, ऊ ū	ओ o, औ au
		. m		
		: h		

PREFACE.

काणादं पाणिनीयं च सर्वशास्त्रोपकारकम्

Kāṇādaṁ Pāṇinīyaṁ ca sarvaśāstropakārahakam.

“Logic and grammar are indispensable aids for every branch of knowledge.”

This little book, called A PRIMER OF INDIAN LOGIC, is primarily based on Annambhaṭṭa's Tarkasaṁgraha and is designed to serve as an introduction, not only to the study of Indian logic as embodied in the Nyāya-Vaiśeṣika literature in Sanskrit, but also to the study of Indian philosophy in its diverse systems. In preparing this book, the oft-quoted Sanskrit dictum given above was borne in mind.

This book comprises three parts. Part I contains an historical introduction. Part II gives the Sanskrit text of the Tarkasaṁgraha in the Devanāgarī script and in English transliteration. Part III forms the bulk of this work and contains an English rendering of the Sanskrit text accompanied by a critical and comparative exposition of each topic in English. In this exposition, an endeavour is made to combine strict fidelity to the original Śāstraic texts in Sanskrit with an intelligible presentation of the technical ideas of Indian systems of philosophy in an English garb. In the course of this endeavour,



CSL

iv

it has become unavoidably necessary to coin and bring into vogue certain technical terms, which, at first sight, look somewhat uncouth.

Nearly two years ago, I undertook to write this book for the benefit of modern University students, more especially B.A. students offering philosophy as their optional subject, in compliance with a suggestion made by my esteemed friend, Professor P. N. Srinivasacharyar M.A., Professor of Philosophy in the Pacchaiyappa's College, Madras. Messrs. P. Varadachary & Co., Publishers and Book-sellers, 8, Linga Chetty street, Madras, kindly undertook to publish this work. The printing of parts II and III was finished in January 1931 and these two parts were separately made available to students in the beginning of 1931. The complete work, with part I also and a very useful Sanskrit glossary, is now made available in a complete form; and in this form, it is hoped that it will be received well by all the students and scholars interested in Indian philosophy.

The bulk of the matter in this book is directly based on Śāstraic texts in Sanskrit. In the course of the preparation of this work, I consulted well-known English books on Indian philosophy like Professor Radhakrishnan's 'Indian philosophy', Dr. Keith's 'Atomism and Indian Logic', and Dr. Randle's 'Indian Logic in the early schools'.



CSL

My thanks are due, in particular, to two of my young friends and former pupils—to Mr. T. R. Cintamani, M.A., Senior lecturer in Sanskrit, Madras University, for preparing the table of contents and the Sanskrit glossary, and to Mr. T. Candrasekharan, M.A., (Diploma in German) Professor of History of Sanskrit Language and Literature, Madras Sanskrit College and Manager, Journal of Oriental Research, Madras, for reading the proofs. I should also take this opportunity to express my thankfulness to the Madras Law Journal Press, Mylapore, for its very kind and efficient co-operation in seeing this work through the press and to Pandit T. S. Subrahmanya Śāstrī (Sāhitya-Śiromaṇi) of the M. L. J. Press for the alert and willing assistance which he rendered at various stages in getting me to do the work in the midst of my multifarious duties.

Readers are requested to carry out the corrections noted in the accompanying list.

S. KUPPUSWAMI SASTRI.

5, North Mada street, Mylapore.

11th March, 1932.

ERRATA

Part	Page	Line	For	Read
I	32	6	learnings	leanings
II	32	2	शब्द	शाब्द
„	33	2	<i>śabda</i>	<i>śābda</i>
„	37	16	<i>atyantā</i>	<i>anyonyā</i>
III	7	22	the six	the five
„	7	23	system and	system (omitting <i>viśeṣa</i>) and
„	9	6	distinct category	distinct entity (quality or category)
„	10	2	Naiyāikas	Naiyāyikas
„	18	18	impressions	impressions and sound
„	18	20	<i>guṇas</i>	<i>guṇa</i>
„	20	2	syntatic	syntactic
„	30	12	basis of	basis
„	47	6	five kinds	four kinds
„	61	11	(<i>duḥkhas</i>)	(<i>duḥkha</i>)
„	62	17	(<i>samvāya</i>)	(<i>samavāya</i>)
„	84	20	turns to be	turns out to be
„	88	6	small	smell
„	97	23	and 24 page 187	pages 70 and 187
„	110	5	<i>madadhīn</i>	<i>madadhīnā</i>
„	155	21	they	the Naiyāyikas
„	156	5	consistent by	consistently
„	210	3	a arallel	a parallel
„	212	21	preceptive	perceptive
„	250	20	is not associated	is associated
„	288	25	correlation	correlation
			called (<i>uṣanaya</i>)	(<i>uṣanaya</i>)
„	314	16	(<i>anumitikaṇa</i>)	(<i>anumitikaṇa</i>)
„	333	16	expe-	expec-
„	344	12	insc-	inse-
„	346	18	introducing	introducing

TABLE OF CONTENTS.

PART I.

	Pages.
Logic in the West and in India: ...	iii to v
The meaning of the term Logic ...	iii & iv
Sanskrit Equivalents of the term Logic	iv
Logic—a system of Philosophy ...	iv & v
Tarkaśāstra contrasted with other śāstras ...	v
Antecedents and foreshadowings of the Vaiśeṣika and Nyāya ...	vi to xi
Intuitionistic and rationalistic tenden- cies ...	vi & vii
Origin of the Nyāya system of Philo- sophical thought ...	vii & viii
Darśanas—Āstika and Nāstika ...	viii & ix
Beginnings of the Vaiśeṣika and Nyāya systems ...	ix to xi
How the Vaiśeṣika and Nyāya schools emerged and when the doctrines were redacted into sūtras ...	xi to xxx
Manu and Yājñavalkya; their attitude to Tarkaśāstra ...	xi & xii
Rise of pre-Buddhistic logic and meta- physics ...	xii & xiii
Anti-vedic Vaiśeṣika ...	xiii & xiv

Nyāya-sūtras and Vaiśeṣika-sūtras ...	xv & xvi
Date of the sūtras, Jacobi's views criticised ...	xvi to xix
Tarkaśāstra pre-supposed by Kauṭalya	xxii to xxv
The Names Vaiśeṣika and Nyāya; The Nature, Aim and Scope of the two systems ...	xxv to xxix
Syncretism and Synthesis ...	xxix to xxxii
Pairs of allied systems ...	xxxii
After the sūtras to Udayana ...	xxvii to xliii
Is Vātsyāyana himself the author of the aphoristic statements in the Bhāṣya?	xxxv to xxxvii
Uddyotakara and Dharmakīrti ...	xxxviii & xxxix
Vācaspatimiśra ...	xl
Jayanta ...	xli
Bhāsarvajña ...	xli & xlii
Udayana and his contribution ...	xlii
Śrīdhara ...	xliii
Śivāditya's Saptapadārthī ...	xliii & xliv
Gaṅgeśa and his special contribution (The <i>categoristic</i> method replaced by the <i>epistemological</i>) ...	xlvi to xlviii
Raghunātha-śiromaṇi, Jagadīśa and Gadādhara ...	xlix to li
Śaṅkaramiśra and Viśvanātha ...	li & lii
Annambhaṭṭa ...	lii & liii



Concluding remarks and general estimate	...	...	liii & liv
---	-----	-----	------------

PART II.

Sanskrit text with English transliteration 1 to 37.

PART III.

Maṅgala	...	...	3
Explanation of the term Tarkasaṅgraha			4 & 5
The Seven Categories	...	...	5
General Remarks on the Categories	...		5 to 10
The Categories of Annambhaṭṭa compared with those of Gautama	...		6 & 7
Categories according to the Mīmāṃsakas			7
" " Sāṅkhyas	...		7 & 8
Śakti as a category	...	...	9 & 10
Category Dravya, Classified		...	10 to 15
General Remarks on the Classification			10 & 11
Basis of Classification	...	...	11 & 12
Definition and its functions		...	12 to 15
Category Guṇa	...	...	15 & 16
Patañjali's conception of Guṇa		...	16
The Mīmāṃsaka's conception of Guṇa...			16 & 17
The Vedāntin's conception of Guṇa	...		17
Viśeṣa-guṇas and Sāmānya-guṇas	...		18 & 19
Category Karma	...	...	19
Kaṇāda's classification of Karma	...		19 to 20
Duration of a Karma	...	...	20 & 21
The Vaiyākaraṇa's view of Karma	...		21 & 22
Krivā according to the Mīmāṃsakas	...		22

Categories Sāmānya, Viśeṣa, and Sama- vāya	22 to 23
General Remarks on these categories ...	23 to 30
Kaṇāda's conception of Sāmānya ...	30 to 33
General Remarks on Viśeṣas ...	33 to 35
" on Samavāya ...	36
Varieties of relationship	36 & 37
The conception of Jāti according to the Vaiyākaraṇas... ..	38
" " Bhāṭṭas	38 & 39
" " Prābhākaras	39 & 40
" " Bauddhas	40 & 41
" " Advaitins	41
Samavāya according to the Prābhākaras	41
" " Bhāṭṭas and Advaitins	41 & 42
Jātibādhaka according to Udayana ...	42 to 45
General Discussion on Sāmānya and Viśeṣa	45 to 47
Category Abhāva	47
Nature and Classification of Abhāva ...	47 to 57
Abhāva according to the Bhāṭṭas ...	57 & 58
" " Prābhākaras... ..	59 to 61
Mokṣa a variety of Abhāva	61 & 62
The Nyāya conception of Sambandha as external relation	62 to 66
Definition of Pṛthivī and its classifica- tion	66 & 67

Definition of Ap	...	...	67 & 68
„ Tejas	...	...	68 & 69
„ Vāyu	...	...	69 & 70
„ Ākāśa	...	...	70
General remarks on these five substances	...	...	70 & 71
The Atomic Theory	...	...	71 to 75
Nature of Paramāṇu, Dvyaṇuka and Tryaṇuka	...	...	75 to 79
Weak points in the Atomic theory	...	...	79 & 80
Greek Influence on the Atomic theory	...	...	81 & 82
A discussion on Pṛthivī and Ap	...	...	82 to 85
„ Tejas	...	...	86 & 87
„ Vāyu	...	...	87 & 88
„ Ākāśa	...	...	88 & 89
Definition and classification of Kāla and Dik	...	...	89
General remarks on Kāla and Dik	...	...	89 to 93
Conception of Mahākāla	...	...	93
The Vaiyākaraṇa conception of Kāla	...	...	93
Bauddha	„	„	94
Advaita	„	„	94
Sāṅkhya	„	„	94
Definition of Ātman and its classification	...	...	95
„ Manas	...	...	95 & 96
General discussion on the nature etc. of Ātman	...	...	96 to 100



Jivātman and Paramātman	... 100 to 103
Ātman in the Sāṃkhya and Yoga systems	... 103
Ātman according to the Bhāṭṭas and the Prābhākara	... 103 & 104
" to Rāmānuja	... 104
" the Bauddhas	... 104
" Advaitins	... 104
General discussion regarding Manas	... 105 & 106
Manas according to the Bhāṭṭas	... 106
" " Advaitins	... 106
Nyāya Realism	... 106 to 108
God in the Nyāya and Vaiśeṣika systems	108 to 110
Rūpa and its classification...	... 110
Rasa	... 111
Gandha	... 111
Sparsa	... 111 & 112
General remarks on these Guṇas	... 112 to 115
Pilupākavāda and Piṭharapākavāda	... 115 to 116
Sāṃkhyā and its varieties	... 116 & 117
General remarks on numbers	... 117 to 120
Apekṣābuddhi	... 117 to 120
Parimāṇa and its varieties...	... 120 & 121
Prthaktva	... 121
Samyoga	... 121
Vibhāga	... 121
Paratva and Aparatva	... 121 & 122
General remarks on these qualities	... 122 to 129

Gurutva	...	... 129
Dravatva	...	... 129 & 130
Sneha	...	... 130
General remarks on these qualities	...	... 130
Śabda and its kinds	...	... 130 & 131
General remarks on the nature of sound	...	131 to 133
Conception of sound according to the Bhāṭṭas and the Prābhākaras	...	... 133 & 134
The Doctrine of Sphoṭa	...	... 134
Cognition and its kinds	...	... 134
Recollection	...	... 134
Experience and its kinds	...	... 135
Valid experience	...	... 135
Erroneous experience	...	... 135
Four kinds of valid experience	...	... 135
Instruments of valid experience	...	... 135 & 136
General remarks on the nature of Buddhi	...	136
Buddhi according to Sāṃkhyas and Advaitins...	...	... 136 & 137
Nirvikalpaka and Savikalpaka Jñāna	...	... 137 & 139
Refutation of the Sāṃkhya view of Buddhi	...	... 139 to 143
Smṛti and Anubhava	...	... 143 to 145
Varieties of Anubhava	...	... 146
Nyāya theory of Truth and Error	...	... 147 to 159
Khyātivādas (Theories of Error)	...	... 160 to 165
Ātmakhyātivāda	...	... 160
Asatkhyātivāda	...	... 160 & 161



Akhyātivāda	...	161 to 163
Anyathākhyātivāda	...	163 to 165
An Examination of the Khyātivādas	...	165 to 169
The Pragmatism of the Naiyāyika	...	169 to 174
Nyāya theory of truth and error con- trasted with the views of other schools	...	174 to 178
A synthetic review of the theories of Bhrama (error)	...	178 to 180
Instruments of knowledge in Indian Philosophy	...	180 to 182
Arthāpatti as a distinct Pramāṇa	...	182 to 189
Four kinds of Pramāṇa	...	189
Karaṇa	...	190
Kāraṇa	...	190
Kārya	...	190
Kinds of Kāraṇas	...	190
Samavāyikāraṇa	...	190
Asamavāyikāraṇa	...	190 & 191
Nimittakāraṇa	...	191
Asādhāraṇakāraṇa	...	191
General remarks on causality	...	191 to 194
The meaning of Anyathāsiddha	...	194 to 200
Conception of Kārya	...	200 & 201
General remarks on Samavāyikāraṇa	...	201 to 204
General remarks on Asamavāyikāraṇa	...	204 to 207
Theory of causation	...	207 to 211
Pratyakṣakāraṇa	...	211

Pratyakṣajñāna and its varieties	... 212
Nirvikalpakapratyakṣa ...	... 212
Savikalpakapratyakṣa ...	... 212
General remarks on Pratyakṣa	... 212 to 217
Vaiyākaraṇa view of Nirvikalpakapratyakṣa ...	... 217 to 219
Advaita view of Nirvikalpakapratyakṣa	219 to 221
Intuition in Nyāya-Vaiśeṣika system ...	222 & 223
Definition of Pratyakṣa according to the Bhāṭṭas and Prābhākaras	... 223 to 225
Sannikarṣa and its varieties	... 225 to 228
General remarks on Sannikarṣa	... 228 to 243
Alaukikapratyakṣa ...	... 234 to 240
Alaukikasannikarṣa ...	... 240 to 243

CHAPTER II.

Definition of the Instrument of Inference	... 244
„ Inferential cognition...	244
„ Subsumptive reflection	244 & 245
„ Co-existence	... 245
„ Pakṣadharmatā	... 245
Anumāna and Anvikṣā ...	... 245 & 246
Inference includes all knowledge	... 246 & 247
General remarks on the terms Pakṣa, Sādhya and Hetu or Sādhana	... 247 to 248
General remarks on Anvīti	... 248 & 249

Explanation of Pakṣatā ...	249 to 252
Parāmarśa examined ...	252 to 255
Parāmarśa not necessary according to	
Mīmāṃsakas and Vedāntins ...	253 to 255
Vyāpti and its definition ...	255 to 257
The history of Vyāpti ...	257 to 261
Nature of the relation of Vyāpti ...	261 & 262
Early writers on Vyāpti ...	262 to 264
Process of inference ...	264 to 268
The negative phase of Vyāpti ...	268 & 269
Bhāṭṭas and Vyāpti ...	269 to 271
Prābhākaras and Vyāpti ...	271 to 274
Adverse criticism of inference by Cārvā-	
kas and the Western Empiricist ...	274 & 275
Refutation of this criticism by the	
Mīmāṃsakas, the Naiyāyikas and	
Bradley ...	275 to 279
Two kinds of inference ...	279 & 280
General remarks on the two kinds ...	281 & 282
Distinction between Svārthānumāna	
and Parārthānumāna ...	282 & 283
Benedetto Croce's view on the above ...	283 & 284
Nyāyaprayoga ...	285 & 286
The five members of a syllogism ...	286 & 287
General remarks on the above ...	287 to 290
Vātsyāyana on the five members ...	290 to 292
Professor Randle on the five members...	292 to 294

The five-membered syllogism of Nyāya contrasted with the syllogisms of the Mīmāṃsakas and the Bauddhas	294 to 298
Nyāya syllogism compared with Aristotelian syllogism	... 298 to 301
Kinds of probans	... 301
Probans of the Anvayavyatirekī type	... 301 & 302
„ Kevlānvayī type	... 302
„ Kevalavyatirekī type	... 302 & 303
Pakṣa	... 303 & 304
Sapakṣa	... 304
Vipakṣa	... 305
Probans according to the Advaita Vedāntins	304 & 305
„ „ Bhāṭṭas	305
Fallacious reasons	... 305 & 306
Straying-reason (<i>Vyabhicārin</i>)	... 306
The Common strayer (<i>sādhāraṇa</i>)	... 306 & 307
„ „ (<i>asādhāraṇa</i>)	... 306 & 307
Non-conclusive strayer (<i>anupāsāṇhārin</i>)	... 307 & 308
Adverse reason (<i>viruddha</i>)	... 308
Opposable reason (<i>satpratipakṣa</i>)	... 308
Unestablished reason (<i>asiddha</i>)	... 309
<i>Āśrayāsiddha</i>	... 309
<i>Svarūpāsiddha</i>	... 309
<i>Vyāpyatvāsiddha</i>	... 310 & 311



Stultified reason (<i>bādhita</i>)	...	311 & 312
General remarks on semblances of reason	...	312 to 323
Hetvābhāsa according to the Vaiśe- ṣikas	...	323 to 324

CHAPTER III.

Upamāna	...	325 & 326
General remarks on Upamāna	...	326 to 328

CHAPTER IV.

Valid verbal testimony	...	329
Definition of word	...	329
General remarks on verbal testimony	...	329 to 332
Charge of Dogmatism against Indian Philosophy examined	...	330 & 331
Padaśakti	...	331 & 332
Causes of Verbal cognition	...	332 & 333
Verbal expectancy	...	332
Congruity	...	332 & 333
Proximity	...	333
General remarks on the causes of verbal cognition	...	334 to 337
Śabdavṛttis	...	337 & 338
Classes of sentences	...	338 & 339
Erroneous experiences and their kinds	...	339 & 340
Doubt	...	339 & 340
Misapprehension	...	340
Indirect argument	...	340



CSL

xix

Two kinds of recollection	...	340 & 341
Qualities—Pleasure, Pain, Desire, Dislike, Volitional effort, Dharma, and Adharma		341
The Viśeṣaḡuṇas		341 & 342
Three kinds of tendencies (<i>saṃskāra</i>)	...	342 & 343
Activity		343
Generality		343 & 344
Specialities		344
Inherence		344
Antecedent non-existence		345
Annihilative	„ ...	345
Total	„ ...	345
Reciprocal	„ ...	345
Conclusion		346
Sanskrit Glossary		347 to 364



CSL

॥ श्रीः ॥

॥ तर्कसंग्रहः ॥

A PRIMER OF INDIAN LOGIC

PART I

INTRODUCTION



SECTION I.

PRELIMINARY : LOGIC IN THE WEST AND IN INDIA.

In the cultural history of Europe, over twenty-two centuries ago, thinking, like speaking, needed an elucidative and regulative aid and found it in a distinct branch of investigation, which was founded and organised in Greece by Aristotle and which came to be designated *Logic*. It is significant that the name *logic* is etymologically connected with the Greek word *logos*, which denotes both 'thought' and 'word' or 'discourse'. The significance of this etymological connection can be adequately appreciated if it is remembered that *logic*, in its rise and development in the western world, particularly in Greece, was closely connected with *rhetoric*. Thus the name *logic* is of a tell-tale character in its application to logic in the West; and it may be taken to indicate how, almost from its very rise, western logic found itself in the firm grip of formalism and how it took more than twenty centuries for the scientific method underlying Aristotle's *Organon*



A PRIMER OF INDIAN LOGIC [PART I

to be redeemed, brought into prominence and implemented in the *Novum Organum* of Francis Bacon (1561-1626). The term *logic* should not be taken to carry with it all these implications of European history when it is used in the phrase *Indian logic*. This phrase is usually rendered by the Sanskrit equivalents—*ānvīkṣikī*, *nyāyavistara*, *nyāyadarśana*, *tarkaśāstra* and *pramāṇaśāstra*. It is also usual to describe *Indian logic* by the anglicised phrase *Nyāya-Vaiśeṣika system* and it is usually described thus in this work. All these phrases are significant and appropriate in one way or other, particularly in view of the place which Indian logic occupies in the cultural history of India and of the manner in which it arose and grew—not as a mere grammar of thinking but as an orthodox (*āstika*) system of philosophy with a special stress on the science of methodical reasoning in both its inductive and deductive aspects, this science forming its dominant and distinctive part. Indian logic is *ānvīkṣikī* or *nyāyavistara* or *nyāyadarśana* in the sense that it is a philosophical system, of which methodical reasoning or investigation of knowledge got through observation or perception and trustworthy verbal testimony forms the central theme;



it is pre-eminently the science of ratiocination or *larkaśāstra*; and in contrast with the *padaśāstra* or 'the science of grammar' (*Vyākaraṇa*) and with the *vākyaśāstra* or 'the exegetics' (*Mīmāṃsā*), it is described as the *pramāṇaśāstra* or the epistemological science, chiefly concerned with valid knowledge and its sources. That Indian logic is usually described as the *Nyāya-Vaiśeṣika* system is not because it is the result of the *syncretism* of the two opposing systems—*Nyāya* realism and Atomistic pluralism; rather it is so described because at a very early stage in the history of Indian logic, the *Vaiśeṣika* stress on the *inductive* phase of inference came to be *synthesised* with its *deductive* phase in the *Nyāya* theory of syllogistic reasoning. Those who are familiar with western logic and desirous of studying Indian logic from a historical and comparative point of view will do well to bear in mind the fact that, while one may find striking parallels in the Indian and western systems of logic, one should not be misled by such parallels and lose sight of the fundamental differences in respect of scope and method, which Indian logic discloses in its rise and development, as compared with western logic.



CSL

A PRIMER OF INDIAN LOGIC [PART I

SECTION II.

ANTECEDENTS AND FORESHADOWINGS OF THE VAISESIKA AND NYAYA.

The story of India's quest for truth and of India's attempts to lay out suitable ways and approaches to truth is long and varied and it has been reconstructed with a considerable measure of success by several eminent scholars, Indian and alien, from the ancient literary monuments of India, which are mostly in the form of Sanskrit works. In all this quest and these attempts, a careful student of the history of Indian philosophical thought may discern, almost from the very beginning, two tendencies—the *intuitionistic* and the *rationalistic*, and two chief aims—the achievement of *Dharma* and the realisation of *Brahman*. If one of the R̥g-Vedic seers could be said to have boldly *intuited* the *monistic absolute* in the well-known verse "That One breathed breathlessly by itself" (*Ānūdarātām svadhayā tadekam*: R. V.—X-129-2), it would not be far-fetched to find the rationalistic exhortation of another R̥g-Vedic seer in the verse "Meet one another, discuss and understand your minds" (*Sam̐gacchadhvam̐ sam̐vadadhvam̐ sam̐ vo manāmsi jānatām*: R. V.—X-191-2). These two tendencies came to



exhibit themselves throughout the Vedic age, in close association with the two aims mentioned above. On one side, as a result of the influence of the rationalistic tendency on the ritualistic aspect of the Veda, ritualistic and exegetic doctrines, which, in due time, emerged as Jaimini's system of Pūrva-Mīmāṃsā, were developed. And, on the other side, the combined workings of the intuitionistic and rationalistic tendencies in the direction of spiritual insight and knowledge of truth led to the emergence of the Upaniṣadic philosophy of *Ātman*. This philosophy was marked by a pronounced emphasis on the efficacy and value of intuition, which culminated in Bādarāyaṇa's system of Vedānta. The dominant feature of the philosophy of the Upaniṣads is its monistic absolutism, which led up, within the Upaniṣadic period itself, to rationalistic reactions of different types, representing collateral and casual phases of Upaniṣadic thought—some of them coming to be systematised later on in the dualism and realism of Kapila's Sāṃkhya and the allied discipline of Patañjali's Yoga, some others eventually giving rise to the pluralistic rationalism of Kaṇāda's *Vaiśeṣika* system and its complementary *Nyāya* of Gautama, and yet others emerging as anti-

Vedistic rebels in the form of the Jaina *may-be-ism* (*syādvāda*), the Bauddha idealism (*viññānavāda*) and nihilism (*śūnyavāda*), and the Cārvāka materialism. All these post-Upaniṣadic systems came to be called *darśanas* (*darśanāni*). It should be noted here that the term 'system' is very inadequate as the English equivalent of the Sanskrit word '*darśana*'. While the former word brings into prominence the idea of systematisation, the latter word brings into relief the fact that the plenary intuition of *truth* or *spirit* (*tattvadarśana* or *ātmadarśana*), which a gifted saint or seer came to have, lies at the *root* of every system of Indian philosophy and forms its *fruit* also. A long-established and widely accepted tradition classifies these *darśanas* into *āstika* and *nāstika*. The history of the meaning of these two words throws some light on the manner in which the ground of classification happened to be shifted under varying circumstances. Pāṇini's sūtra 4-4-60 (*asti nāsti diṣṭam matih*) gives the derivation of the words *āstika*, *nāstika* and *daiṣṭika*; and according to Pāṇini, *āstika* is 'one who believes in the other world', *nāstika* is 'one who does not believe in the other world' and *daiṣṭika* is a 'pre-destinarian' or 'fatalist'. This is the oldest recorded explanation



SEC. II]

INTRODUCTION

ix

CSL

of these words. On the basis of this explanation, even Jainism, and Buddhism in some of its aspects, could be described as *āstika* systems. An old popular tradition would take the word *āstika* in the sense of 'one who believes in God'. If this should be accepted, Jaimini's Pūrva-Mīmāṃsā and Kapila's Sāṃkhya, which are usually included in the *āstika* list, ought to be dropped from that list, as they do not recognise *Īśvara*. A post-Buddhistic, but pre-Christian, tradition fixed the meaning of the word *āstika* as 'one who believes in the infallibility and the supreme authority of the Veda' and of the word *nāstika* as 'one who does not believe in it'. This tradition has been widely accepted for a long time. According to this, the Sāṃkhya and Yoga, the Vaiśeṣika and Nyāya, the Pūrva-Mīmāṃsā and Vedānta are described as *āstikadarśanas*, and the Cārvāka, Jaina and Bauddha systems as *nāstikadarśanas*. In this context, whenever the terms *orthodox* and *heterodox* happen to be used as the English equivalents of *āstika* and *nāstika*, it should be remembered that they have reference to belief and disbelief in the authority of the Veda.

Though the first beginnings of the Vaiśeṣika and Nyāya systems are misty in certain respects, a



CSL

A PRIMER OF INDIAN LOGIC [PART I

careful student is not likely to miss the foreshadowings of the central doctrine of these systems in the Upaniṣads. In the well-known three-fold scheme of self-culture leading to self-realisation, as taught in the oft-quoted Upaniṣadic text “Verily, Maitreyi, the *Spirit* should be *realised, heard, discussed* and *constantly contemplated upon*” (*Ātmā vā are draṣṭavyaś śrotavyo mantavyo nididhyāsitarvyaḥ*—Bṛhad. IV—5), it is generally accepted that hearing or initial comprehension (*śravaṇa*) represents the inaugural stage, investigation and discussion with the help of *reason* (*manana*) represent the central stage and constant contemplation (*nididhyāsana*) stands for the culminating stage. The grim spiritual teacher of the Kāthopaniṣad, *Death* (*Yama*), pulls up the rationalist of the Upaniṣadic age with the warning “Self-realisation cannot be got through ratiocination or *tarka*” (*Naiṣā tarkeṇa matirāpaneyā*—Kāṭha. II—9). From these foreshadowings of deliberate attempts to exercise reason, when considered together with the fact that philosophical debates, such as those that were carried on under the auspices of Ajātaśatru and Janaka, were very common during the Upaniṣadic age, the inference is irresistible that, already during the period of the Upaniṣads, some



logical doctrines should have not only begun to appear but also progressed beyond the nebulous stage.

SECTION III.

HOW THE VAISESIKA AND NYAYA SCHOOLS EMERGED AND WHEN THEIR DOCTRINES WERE REDACTED INTO SUTRAS.

Before the end of the Upaniṣadic period and prior to the advent of the Buddha, the Vedic scriptures embodying the results of the intuitive insight of the Vedic and Upaniṣadic seers had asserted their authority so far as to persuade a large section of rationalistic thinkers to agree to play second fiddle to scriptural authorities. This should have resulted in the development of the pre-Buddhistic *Nyāya* method in close association with Vedic exegesis and accounts for the earlier use of the term *Nyāya* in the sense of 'the principles and the logical method of Mīmāṃsā exegetics.' This also accounts for the fact that, even after the disentanglement of the *Nyāya* logic from Vedic exegetics, the legislators of ancient India like Manu and Yājñavalkya emphatically recognised the



CSL

A PRIMER OF INDIAN LOGIC [PART I

importance and value of logical reasoning (*tarka*) in a correct comprehension of *dharma* as taught by the Vedas (*Manu*—XII—105 and 106; *Yājñavalkya*—I—3). Another section of rationalistic thinkers who did not agree to play second fiddle to scriptural authorities, perhaps developed and expounded rationalistic doctrines on independent lines, without subjecting themselves to the thralldom of Vedic religion and philosophy. Some of these doctrines perhaps shaped themselves into the Sāṃkhya thought of the pre-Buddhistic stage, with a marked degree of hostility to Vedic ritualism. Some other doctrines of this kind gave rise to the pre-Buddhistic logic and metaphysics of the Vaiśeṣika, with a special leaning in favour of the inductive method of reasoning based on observation and analysis and with a simple rationalistic scheme of two sources of valid knowledge—perception and inference (*pratyakṣa* and *anumāna*). It is very likely that the anti-Vedic speculations of the pre-Buddhistic Sāṃkhya and the anti-Vedic logic and epistemology of the pre-Buddhistic Vaiśeṣika paved the way for the development and systematisation of Buddhism. It may here be borne in mind that Buddhistic tradition, as preserved in



ancient Chinese records, readily recognises the priority of the Sāṅkhya and the Vaiśeṣika to Buddhism. (See Ui's *Vaiśeṣika Philosophy*—pages 3 and 4.)

About the fifth century B. C., when the anti-Vedic movements of Buddhism rose and began to spread, the exponents of Vedic philosophy and religion keenly felt the need for showing greater accommodation to rationalistic modes of thought. The rationalistic resources available for Vedic religion and philosophy had to be pooled together and kept fit for defensive and offensive use, as against the impact from collision with *avaidika* developments. On the one side, it was found easy to disentangle from its Vedistic environment the logical method (*Nyāya*) of Vedic exegetics; and on the other side, to bring the unfettered methods of reasoning and analysis known to the early Vaiśeṣika under the influence of the attempts for *rapprochement* made by the Vaidika thinkers turned out to be an easy task, chiefly as a result of the disquieting nihilistic excesses of early Buddhism. Thus, the *Nyāya* of the Vedic exegesis and the logic and metaphysics of the early *anti-Vedic Vaiśeṣika* came to fraternise with each other and gave rise to two sister



CSL

XIV A PRIMER OF INDIAN LOGIC [PART I

schools of philosophical reasoning—the *Vaiśeṣika* school mainly concerned with inductive observation and analysis, and the *Nyāya* school chiefly concerned with the formulation and elucidation of the principles of ratiocination on the basis of inductive reasoning. These two schools should have appeared in a fairly definite form, with their characteristic methods of reasoning and metaphysics, by the middle of the fourth century B. C., though the chief doctrines of these schools came to be systematised and redacted in their basic sūtras at a relatively later date. This statement may receive good support from the following facts, if they could be taken to be conclusively established. Bhadrabāhu, a Jaina sage, whose activity as a Jaina logician may be assigned to about 357 B. C., was quite familiar with an old theory of ten-membered syllogism. The *Nyāya* logic was known to Kātyāyana of the fourth century B. C., as Goldstucker has shown in his work on '*Pāṇini and his place in Sanskrit literature*'. Bādarāyaṇa's *Vedānta-sūtras* (II-ii 11 to 17) definitely presuppose the *Vaiśeṣika*. The *Lalitavistara* and *Milindapañha* mention the *Vaiśeṣika*. Even the *Vaiśeṣika-sūtras*, which were, in all probability, produced later than the middle of the fourth century



B. C., do not controvert any of the Buddhistic doctrines, while Buddhistic tradition generally recognises the pre-Buddhistic origin of the Vaiśeṣika. These considerations, which tend to show that the Nyāya and Vaiśeṣika schools came into being in a definite form before the middle of the fourth century B.C., cannot be lightly brushed aside.

The doctrines of these two schools were systematised and redacted in the form of the Nyāya-sūtras and Vaiśeṣika-sūtras. The authorship of the former is ascribed to Gautama, and that of the latter to Kaṇāda. According to the generally accepted Indian tradition, which goes back to the early centuries of the Christian era, Gautama is otherwise known as Akṣapāda and Kaṇāda is otherwise known as Ulūka and Kāśyapa. It will be obvious to those who are familiar with the traditions of ancient India that *Akṣapāda* was the *personal* name and *Gautama* the *gotra* name of the author of the Nyāya-sūtras, and that *Kaṇāda* and *Ulūka* are the *personal* names and *Kāśyapa* the *gotra* name of the author of the Vaiśeṣika-sūtras, in the same way as *Pakṣilasvāmin* is the personal name and *Vātsyāyana* the *gotra* name of the author of the Nyāyabhāṣya. Though the exact dates of Kaṇāda,



XVI A PRIMER OF INDIAN LOGIC PART I

and Gautama are not known, the dates of their sūtras can be fixed within fairly definite limits. Jacobi, in his well-known article on the dates of the philosophical sūtras (Journal of the American Oriental Society XXXI—1911), endeavours to show that the Nyāya-sūtras and the Brahma-sūtras were redacted between 200 and 500 A.D., that the Vaiśeṣika-sūtras and Mīmāṃsā-sūtras were redacted at a somewhat earlier date, that the redaction of the Yoga-sūtras should be assigned to about 450 A. D., and that the Sāṃkhya-sūtras were produced at a much later date, later than the fourteenth century. With regard to the Sāṃkhya-sūtras, it is generally accepted that they were composed later than the fourteenth century, though the *Tattvasamāsa*, which may be regarded as the nucleus of the basic sūtras of the Sāṃkhya system, is perhaps older than Īśvarakṛṣṇa and the Christian era and is certainly older than the *Bhagavadajjuka*, a farce earlier than the seventh century A. D. (See Journal of Oriental Research, Madras, Vol. II. pages 145 to 147). If the Bhikṣu-sūtra referred to in IV-iii-110 of Pāṇini's *Aṣṭādhyāyī* and the Brahma-sūtra mentioned in XIII-4 of the Gītā could be taken to refer to Bādarāyaṇa's Brahma-sūtras, it would be difficult to accept, without due



reservations, Jacobi's argument in its application to the Vedānta-sūtras. The name Patañjali, borne by the author of the Yoga-sūtras, presents some difficulties to Jacobi, as the date of Patañjali, the author of the Mahābhāṣya, is accepted to be the middle of the 2nd century B. C. But Jacobi would attempt to differentiate the author of the Mahābhāṣya from the author of the Yoga-sūtras, though, as a matter of fact, the ancient tradition identifying the two Patañjali's is sound and maintainable on reasonable grounds. The central point of Jacobi's argument relates to the internal evidences furnished by the nature of the Buddhist doctrines controverted in some of these sūtras. The Nyāya-sūtras, according to Jacobi, refute the nihilistic *śūnya-vāda* of Nāgārjuna (3rd century A. D. circa) and do not refute the idealistic *viññāna-vāda* of Asaṅga and Vasubandhu (middle of the 4th century A. D.). But, according to Vātsyāyana and Vācaspatimiśra, the Nyāya-sūtra IV-2-26 refutes the *viññāna-vāda*. It should also be remembered here that the *śūnya-vāda* and *viññāna-vāda* doctrines were not introduced in the world for the first time by Nāgārjuna and Asaṅga and Vasubandhu and that, before these Buddhist teachers, these old doctrines had been



CSL

xviii

A PRIMER OF INDIAN LOGIC [PART I

in existence for a long time. Even if this line of argument adopted by Jacobi should be accepted as satisfactory, it does not touch the Vaiśeṣika-sūtras; and if the obverse of this argument were to be applied to these sūtras, the logical result would be that they should be held to be pre-Buddhistic. Kauṭaliya Arthaśāstra mentions the types of thought comprising *ānvīkṣikī*, in the statement:—*Sāṅkhyaṃ yogo lokāyatam cetyānvīkṣikī* (Vol. I—page 27—Trivandrum edition). Though the date of the Kauṭaliya is not yet finally settled, the general trend of well-informed and unprejudiced opinion among Indian and alien Indologists is in favour of assigning that great work to 304 B. C. In this extract from the Kauṭaliya, there is no specific mention of Nyāya or Vaiśeṣika as such. Attention is drawn by Ui and Randle to noteworthy cases of parallelism between the Vaiśeṣika-sūtras and Nyāya-sūtras, in which it would be more reasonable to say that the former sūtras were used in the composition of the latter (See Ui's '*Vaiśeṣika philosophy*'—Introduction, page 16—note 1; and Randle's '*Indian logic in the early schools*'—Introduction, page 7, note 1). There is evidence to show that the sixth Jaina schism (18 A. D.) presupposes the Vaiśeṣika redac-



SEC. III]

INTRODUCTION

xix

tion (Ui's '*Vaiśeṣika philosophy*'—Introduction, page 34). Chiefly, on these grounds, it is surmised by several scholars that the Vaiśeṣika-sūtras should have been redacted in the pre-Christian era, subsequent to 300 B. C.; and that the Nyāya-sūtras should have been redacted about the time of Nāgārjuna and Deva, between 150 and 250 A. D. may be inferred from the fact that the sūtras 2-2-17—19 seem to presuppose the refutatory comments in Nāgārjuna's *Vigrahavyāvartanī* on the realistic position regarding the relation between *pramāṇa* and *prameya* (Ui's *Vaiśeṣika Philosophy*—Introduction pages 84 to 86). Randle concludes that the "Vaiśeṣika and Nyāya were systematised between 200 B. C. and 200 A. D., the Vaiśeṣika being the earlier of the two"; and that "the indications, such as they are, point to the beginning of the first century A. D., as the latest date for the systematisation of the Vaiśeṣika". (Randle's '*Indian logic in the early schools*'—Introduction, pages 16 and 17.)

These conclusions, based as they are on good grounds as far as they go, would appear to require reconsideration on a careful scrutiny of all the evidences available. That the redaction of the Nyāya-sūtras presupposes that of the Vaiśeṣika-



A PRIMER OF INDIAN LOGIC [PART I

sūtras may be readily admitted. It is not easy to establish that the Vaiśeṣika-sūtras were redacted subsequent to 300 B. C., on the ground that the name Vaiśeṣika is not contained in the extract from the Kauṭaliya quoted above. Those who are sufficiently familiar with the use of the word *yoga* in its old sense of *vaiśeṣika*, as it is found used, for instance, in Vātsyāyana's *bhāṣya* on 1-1-29, are not likely to consider it a strained interpretation to take the word *yoga*, as used in the Kauṭaliya, in the sense of *vaiśeṣika*. In fact, according to Vācaspatimiśra's *Tātparyatīkā* and the *Bhāṣyacandra* on the *bhāṣya* on 1-1-29, the word *yoga* may be taken in the somewhat comprehensive sense of Nyāya, including the Vaiśeṣika, the Nyāya being a philosophical school laying special stress upon *yoga* or *yukti* or reasoning (*yogo yuktiḥ pradhānatayā vidyate yeṣām*—*Bhāṣyacandra*). Further, in the extract quoted above from the Kauṭaliya, scholars have generally overlooked one important point, to which sufficient prominence ought to be given in this connection. In chapter 2—the Vidyāsamuddeśa section of the Kauṭaliya, the chief branches of knowledge (*vidyā*), according to Kauṭalya, are stated at the outset. These are four:—*ānvīkṣikī* (logic and philosophy),

trayī (the Vedic religion and philosophy of *dharma* and *adharma*), *vārtā* (the economic science and philosophy of wealth) and *daṇḍanīti* (the science and philosophy of polity). Then there is a reference to the view of the *Mānavās* (Manu's disciples or ancient legislators), according to which *ānvīkṣikī* should be regarded as a special part of *trayī*. This view, it may be noted, is consistent with the spirit of the Vedic and Upaniṣadic age, when *logic* (Nyāya) had not yet been disentangled from its applications to Vedic religion and philosophy. There is also a further reference to the materialistic doctrine of the Cārvākas (the followers of Bṛhaspati), that *trayī* (including *ānvīkṣikī*) is only a pretension or imposture of one who knows the ways of the world and that only *vārtā* and *daṇḍanīti* should be reckoned with as the two real *vidyās*. The followers of Uśanas (the teacher of the Aśuras) are afterwards referred to as recognising only one *vidyā*—viz., the *daṇḍanīti*. At the end of this chapter, Kauṭalya reiterates his views about the four branches of learning and explains their nature and aim. In the concluding para of this chapter, he makes two important observations. One is to the effect that *ānvīkṣikī* consists of Sāṃkhya, Yoga and Lokāyata. The

other is that *ānvīkṣikī* is helpful to the world through its ratiocinative process in the investigation of the soundness or unsoundness of the conclusions and doctrines of the different branches of knowledge.

*Sāṃkhyaṃ yogo lokāyatam cetyānvīkṣikī.
 Dharmādharmau trayyām. Arthānarthau vārtā-
 yām. Balābale caitāsām hetubhiranvīkṣamāṇā
 ānvīkṣikī lokasyopakaroti; vyasane abhyudaye ca
 buddhimavasthāpayati; prajñānvīkṣakriyāvaiśāradyaṃ ca karoti.*

*Pradīpaḥ sarvavidyānām upāyaḥ sarva-
 karmaṇām |*

*Āśrayaḥ sarvadharmāṇām śāśvadānvīkṣikī
 matā ||*

(Pages 27 and 28 of the Kauṭaliya, Trivandrum edition.)

It is evident here that Kauṭalya elucidates the two meanings of the term *ānvīkṣikī*. One is the general sense, *philosophical enquiry* or *philosophy*. In this sense, it is used in the first sentence of the above extract. As already pointed out, the word *yogaḥ* in this sentence refers to the Vaiśeṣika logic; or even if it be taken in the special sense of the *yoga* discipline of Patañjali's



CSL

Sec. III]

INTRODUCTION

xxiii

system, the word *lokāyata* does not refer to the materialism of the Cārvākas, but very probably it refers to the logic of the Vaiśeṣika and Nyāya in its secularised form and as disentangled from its Vedic associations. It should be noted here that the view of the Cārvāka materialist is separately mentioned in a previous part of the same chapter and Kauṭalya rejects it and is not prepared to bring the Cārvāka doctrine under any recognised *vidyā* or branch of learning. Vātsyāyana, in the concluding part of his bhāṣya on 1-1-1, amplifies the second sense of the word *ānvīkṣikī*, i.e.—‘logic which investigates by means of rationalistic methods’ (*hetubhīranvīkṣa-mānā*) and gives Kauṭalya’s verse quoted above, with its last quarter modified as “*vidyoddeśe prakīrtitā*”. It is quite clear from this amended quarter of the verse, as given by Vātsyāyana, that he is quoting from the *Vidyāsamuddeśa* section of the Kauṭaliya. It is hardly necessary to point out that a careful consideration of the above extract from the Kauṭaliya in comparison with its striking parallel in Vātsyāyana’s bhāṣya on 1-1-1 would make it very difficult to believe that *ānvīkṣikī*, in the sense of ‘system of logic’, was not presupposed by the *arthaśāstra* of Kauṭalya. Further, a careful



XIV A PRIMER OF INDIAN LOGIC [PART I

consideration of the extract from Nāgārjuna's *Vigrahavyāvartanī*, which Ui gives in pages 84 and 85 of his introduction to the '*Vaiśeṣika philosophy*', in comparison with its parallel in the Nyāya-sūtras 2-2-17—19, would tend to show that Nāgārjuna is presupposing these sūtras and refuting the view embodied in them, rather than support Ui's inference in the reverse direction. Patañjali, at the end of his *bhāṣya* on Pāṇini's 3-2-123, remarks—"Other thinkers hold that there is nothing known as the *present time*" (*Apara āha—nāsti vartamānaḥ kāla iti*) and gives five verses in support of this view. This portion of the Mahābhāṣya closes with the remark "Another thinker holds that there is such a thing as the *present time*, and it is not perceived in the same way as the Sun's motion is not perceived" (*Apara āha—asti vartamānaḥ kālaḥ*) and supports this view with one verse. Between this portion of the Mahābhāṣya and the Nyāya-sūtras 2-1-40—44, there is a striking parallelism, which none can miss. A careful consideration of these two texts would lead to the impression that Patañjali is here using not only the ideas in the Nyāya-sūtras referred to, but also the phraseology in those sūtras, in his characteristically graphic narration of



a discourse between two imaginary dialogists. All these considerations may reasonably lead to the conclusion that the *Vaiśeṣika-sūtras* and the *Nyāya-sūtras* were redacted between the middle of the fourth century and second century B. C., perhaps towards the end of the fourth century B. C., the *Vaiśeṣika-sūtras* being earlier than the *Nyāya-sūtras*.

SECTION IV.

THE NAMES VAISESIKA AND NYAYA; THE NATURE,
AIM AND SCOPE OF THE TWO SYSTEMS.

It is generally accepted that the names *Vaiśeṣika-darśana* and *Nyāya-darśana* are based upon the terms—*viśeṣa* and *nyāya*. It is not possible now to ascertain exactly what these two terms signified to the early exponents of these two systems, who were responsible for devising and introducing these two names. According to an old tradition recorded by the Chinese Buddhists—*Ci-tsān* (549-623 A.D.) and *Kwhēi-ci* (632-682 A. D.), Kaṇāda's work came to be called the *Vaiśeṣika-śāstra*, since it excelled works of the other systems, more especially the *Sāṃkhya* and it was differentiated from them, the term *vaiśeṣika* being taken in the sense of 'superior to' o



XXVI A PRIMER OF INDIAN LOGIC [PART I

‘distinct from’. (See Uī’s *Vaiśeṣika philosophy*—pp. 3 to 7.) Indian tradition is in favour of connecting the name *Vaiśeṣika* with the doctrine of *specialities* (*viśeṣāḥ*), *viśeṣa* being regarded as the distinctive category of the *Vaiśeṣika* scheme of categories. The *Vaiśeṣika-sūtra*—1-1-4—which practically represents the beginning of Kaṇāda’s *sūtras*, lays special emphasis, not upon any of the categories, but upon ‘the comprehension of truth through similarities and dissimilarities’ (*sādharmyavaidharmyābhyām tattvajñānam*)—upon the striking out of the *one* in the *many*; and this amounts to an unmistakable stress on ‘the *analytic* or *inductive* method of philosophical reasoning’. Gautama’s *Nyāya-darśana* took its name from *nyāya*, which means ‘the *synthetic* or *deductive* method of syllogistic demonstration’. Gautama’s system lays particular stress on the synthetic method of syllogistic reasoning. One of the earlier meanings of the term *nyāya* is ‘exegetic principle or maxim’; and after logical reasoning had been released from *Vedic exegesis*, the term *nyāya* developed the specialised sense of syllogistic reasoning. The appropriateness of using the term *nyāya*, in this specialised sense, as the name of Gautama’s system lies not only in the historical connection



between the Nyāya and Mīmāṃsā systems; but it lies also in the fact that the term *nyāya* means *illustration* or *example* and that example (*udāharaṇa*) is the most important of the five members constituting Gautama's syllogistic expression. Thus it may be seen that the names *vaiśeṣika* and *nyāya* may be connected with the two aspects of sound reasoning—the *analytic* or *inductive* aspect which mounts up from particulars (*viśeṣa*) to the general or universal (*sāmānya*) and the *synthetic* or *deductive* aspect which moves on from the universal (*sāmānya*) to the particulars (*viśeṣa*). In these logical notions, it would be in keeping with the history of Indian philosophical thought to recognise the basis of the names, *vaiśeṣika* and *nyāya*, rather than in the ontological doctrines of *atomism* and *pluralistic realism*. This would account better for the way in which the interrelation of the Vaiśeṣika and the Nyāya came to be conceived of as two sister systems in spite of their differences on the metaphysical side.

The Vaiśeṣika and the Nyāya, in their early and later phases, are not restricted in their scope and aim to logic in a narrow sense. Like other Indian systems, these two form self-contained philosophical



disciplines of a complex character, with a distinctive central theme correlated to their special goal. The final cessation of all miseries (*apavarga*) is the goal of the Vaiśeṣika and the Nyāya. The Vaiśeṣika stresses the analytical side of reasoning and furnishes the metaphysical background and the inductive basis of the Nyāya system. With the Vaiśeṣika material, suitably modified in minor details, the Nyāya builds up a complete system of epistemology and logic, combined to some extent with psychology, ethics, ontology and religion. Such a mixed composition of Indian philosophical systems is due not to any lack of appreciation of differences of value in different things, but rather to the cultural outlook of India, which is dominated by an intense desire to synthesise all the departments of knowledge in a scheme of progressive realisation of life's ends culminating in final emancipation (*mukti*) conceived of as the *summum bonum*. Methodical reasoning, involving a critical investigation of knowledge got through perceptual experience and verbal testimony, i.e., *anvīkṣā*, with the help of the five-membered scheme of syllogistic expression (*nyāya* or *pañcāvayavavākya*), forms the distinctive contribution of the Nyāya to philosophical thought. Since its first



redaction, the Nyāya system has permanently secured for itself a position of importance in the Hindu scheme of Vedic religion and philosophy, chiefly by the ancillary role which it has assumed in its relation to the Veda; and if the Vaiśeṣika also is given a place among the *āstika* systems, it is due mainly to its fraternity with the Nyāya. Gokulānātha, a Naiyāyika of the 16th century A.D., suggests in his philosophical drama, called *Amṛtodaya*, that *Ānvīkṣikī* is the amazonian commander-in-chief of *Śruti*—the empress ruling over the empire of knowledge and emancipation. This poetic representation would be very helpful in appreciating the exact position of the *Nyāya-vaiśeṣika* system in the scheme of *āstika* schools of philosophy.

SECTION V.

SYNCRETISM AND SYNTHESIS.

It has now become usual among modern scholars, when speaking about the historical development of the Vaiśeṣika and Nyāya systems, to refer to the tendency to *syncretism* in these two schools. In chapter II, part I of "*Indian Logic and Atomism*", Dr. Keith dwells upon what he describes



CSL

A PRIMER OF INDIAN LOGIC [PART I

as "the syncretism of the schools" and the "syncretist school". Syncretism, in its strict sense, means the tendency to reconcile and blend two opposing and irreconcilable systems, by minimising differences. In this sense, it would be correct to speak about syncretism in the Vaiśeṣika and Nyāya only with reference to their condition before their redaction into sūtras, and even then, with due reservations. It may be said that, in the pre-Buddhistic age, rationalistic thinking came to have a schismatic split which resulted in two opposing types of rationalistic thought, one linking itself with Vedic tradition and the other antagonising it. As already pointed out at page xiii-*supra*, a *rapprochement* was effected between these two types of thought; and as a result of this, the Vaiśeṣika and Nyāya arose in the form of two sister schools. The tendency which led to the first redaction of these two schools in a fraternal relation may be appropriately described as *syncretism*. Since their definite emergence as two distinct and allied systems about the fourth century B. C., to this day, the Vaiśeṣika and Nyāya have been treated as sister schools, fundamentally agreeing with each other in respect of important metaphysical and logical doctrines and persistently showing some



SEC. v]

INTRODUCTION

CSL
xxxī

comparatively minor differences; and in this condition, they were never regarded as opposing schools and it would not be quite accurate to speak of syncretism in them, in the strict sense of the term. In the somewhat larger sense, however, of synthesis, one may well speak of *syncretism* in these two sister schools from and after their first redaction. In the history of the Nyāya-Vaiśeṣika system, the Vaiśeṣika and Nyāya schools were never regarded as rival schools. Nor were their differences ever forgotten; and till recently, separate Nyāya and Vaiśeṣika treatises continued to be written. In fact, even as late as in the seventeenth century A. D., separate handbooks dealing with the Vaiśeṣika doctrines, like Gaṅgādharasūri's *Kāṇādasiddhāntacandrikā* (Tri-vandrum Sanskrit Series—No. XXV), were written. It should be remembered here that Akṣapāda-Gautama, effected the momentous synthesis between the *inductive* (*Vaiśeṣika*) and *deductive* (*Nyāya*) types of rationalistic thinking, in his doctrine of five-membered syllogistic expression (*nyāyaṭrayoga*) hinging upon the *example* (*udāharaṇa*) as the central member. The Nyāya ontology is built upon the atomic theory and pluralistic realism of the Vaiśeṣika. The Nyāya epistemology, with its fourfold



CSL

xxxii A PRIMER OF INDIAN LOGIC [PART I

scheme of *pramāṇas* is distinctly *pro-Vedic*; and in this respect, it shows a sharp contrast with the *Vaiśeṣika* scheme of *pramāṇas* which consists of perception and inference and which betrays *anti-Vedic* learnings. Such points of contrast have only led to *Vaiśeṣika* gradually losing its hold and influence. Indian philosophical tradition recognises three important pairs of allied systems (*samānāntarāṇi*)—viz., the *Sāṃkhya* and *Yoga*, the *Vaiśeṣika* and *Nyāya*, and the *Mīmāṃsā* and *Vedānta*. Vātsyāyana, in his *bhāṣya* on the *Nyāya-sūtra* (1-1-22), speaks of the *Vaiśeṣika* and the *Nyāya* as *samānāntara*. It is noteworthy that, while the *Sāṃkhya* and *Yoga*, and the *Mīmāṃsā* and *Vedānta* grew as two pairs of allied systems, the *Vaiśeṣika* and *Nyāya* came to be more closely knit together and grew as *twin* systems, chiefly as a result of the complete *synthesis* which the *Nyāya* effected in its logical method.

SECTION VI.

AFTER THE SUTRAS TO UDAYANA.

The extant early works, forming the basic source-books of the *Vaiśeṣika* system, are Kaṇāda's



29
CSL

Sec. vi]

INTRODUCTION

xxxiii

sūtras and Praśastapāda's *Padārthadharma-saṁgraha*, better known under the name of *Praśastapādabhāṣya*. According to Udayanācārya's *Kiraṇāvalī*, as interpreted by Padmanābhamiśra in his *Kiraṇāvalībhāskara* (Benares Sanskrit Series, *Kiraṇāvalī*, page 5), Praśastapāda's *Padārthadharma-saṁgraha* is a comprehensive epitome of the Vaiśeṣika system which presupposes an extensive Vaiśeṣika-bhāṣya, known as *Rāvaṇa-bhāṣya* and attributed to an ancient philosopher called Rāvaṇa. At page 278 of the manuscript of the commentary called the *Prakāṭārthavivaraṇa* on Śaṅkara's *Brahmasūtra-bhāṣya*, preserved in the Government Oriental Manuscripts Library, Madras, Rāvaṇa's *bhāṣya* on the Vaiśeṣika-sūtras is cited. *Prakāṭārthavivaraṇa* is earlier than 13th century A. D. An interesting confirmation of the tradition about *Rāvaṇa-bhāṣya* is contained in the *viṣkambha* to the fifth Act of the *Anargharāghava* (Nirnayasagara edition, page 161). There is evidence to show that this drama must be earlier than the latter part of the ninth century A. D. In this connection, attention is invited to my paper on the *Rāvaṇa-bhāṣya*, which appears in volume III of the *Journal of Oriental research*, Madras, pages 1 to 5. In this paper, it is indicated that it may not



CSL

xxxiv A PRIMER OF INDIAN LOGIC [PART I

be unreasonable to conjecture that the *Rāvaṇa-bhāṣya* was perhaps dominated by atheistic and pro-Buddhistic proclivities, such as were quite in keeping with the text of the *Vaiśeṣika-sūtras* and with the spirit of the tradition characterising the *Vaiśeṣikas* as *ardhavaināśikas* (semi-nihilists), while the work of *Praśastapāda* gave a theistic turn to the *Vaiśeṣika* system and presented its doctrines in an anti-Buddhistic *āstika* setting. There is conclusive proof to show that *Praśastapāda* should be earlier than *Uddyotakara*, the author of the *Nyāyavārtika*, who flourished in the latter part of the sixth or the beginning of the seventh century A. D. Professor *Ui*, in his introduction to the '*Vaiśeṣika philosophy*', draws attention to the evidences showing that *Praśastapāda* should be earlier than *Paramārtha* and *Dharmapāla*. Though *Keith* emphatically asserts in his '*Indian Logic and Atomism*' that *Praśastapāda*'s indebtedness to *Dignāga* is undoubted, it must be said that *Praśastapāda*'s debt to *Dignāga* has not yet been proved. If, on the other hand, *Praśastapāda* could be taken to be presupposed by *Vātsyāyana* on the ground relied upon by *Mr. Bodas* in his introduction to the *Tarkasaṅgraha* (Bombay Sanskrit series, No. LV.), *Dignāga*, who presupposes



Vātsyāyana, cannot be later than Praśastapāda. The two most authoritative commentaries on Praśastapāda's Bhāṣya are Śrīdhara's *Kandalī* and Udayanācārya's *Kiraṇāvalī*. Śrīdhara's date is given as 991 A. D. in his *Kandalī* and Udayana's date is given as 984 A. D. in one of his works—*Lakṣaṇāvalī*. Śrīdhara's reputation is restricted to his Vaiśeṣika work; but Udayana holds a far higher place in Indian philosophy and he is held in high esteem as the Nyāyācārya *par excellence*.

The extant basic works of Nyāya are Gautama's Nyāya-sūtras, the Nyāya-bhāṣya by Vātsyāyana, otherwise known as Pakṣilasvāmin, and the Nyāya-vārtika by Uddyotakara. In the Nyāya-vārtika and other works, there is sufficient evidence to conclusively show that Dignāga, the famous Buddhistic logician, adversely criticised the Nyāya-bhāṣya. Vasubandhu, the famous teacher of Dignāga, criticised the Nyāya-sūtras and the Nyāya-bhāṣya does not reply to Vasubandhu's criticisms. From these facts, it would be reasonable to conclude that the Nyāya-bhāṣya is earlier than about the middle of the fourth century A. D., which is the date for Vasubandhu. Vātsyāyana suggests alternative interpretations to some of the sūtras, as, for instance, in his



CSL

xxxvi A PRIMER OF INDIAN LOGIC [PART I

Bhāṣya on 1-1-5. This may lead to the inference that Vātsyāyana wrote his Bhāṣya, long after the Sūtrakāra, perhaps at a time when the meaning of some of the sūtras had already become a matter for speculation. There has been some controversy among scholars as to whether there was any commentary on the Nyāya-sūtras before Vātsyāyana, and whether the aphoristic statements, which the Bhāṣyakāra introduces in the course of his exposition, are really quotations from some earlier commentary on the sūtras. Professor Windisch and several others are inclined to think that such aphoristic statements are citations from an earlier commentary. Professor Randle discusses this question in his recent work *"Indian logic in the early schools"* (pages 19 to 24) and concludes that these aphoristic statements are not citations from any author but should be viewed as forming "the heritage of the school and as carrying an authority only less than that of the sūtras themselves". Indian tradition, however, is wholly against any speculation of this kind in regard to the aphoristic statements in the Bhāṣya above referred to. In Śāstra literature, more especially in old works like the Bhāṣyas on the various systems, it is a common stylistic device to put



CSL

Sec. VI]

INTRODUCTION

xxxvii

forward a main thesis or argument in the form of a terse aphoristic statement and amplify it in an expository note. Several old Bhāṣyakāras have adopted this device and hundreds of instances can be given from the *Mahābhāṣya* of Patañjali and Śaṅkara's Bhāṣyas on the Bṛhadāranyakopaniṣad and the Brahma-sūtras. In fact, the aphoristic statements which Vātsyāyana makes at the beginning of his expository sections form integral parts of Vātsyāyana's own composition; and it would be as absurd to ascribe such statements to any author different from Vātsyāyana, as it would be to ascribe the aphoristic statement "Since there is no difference from cattle and other lower animals" in Śaṅkara's Bhāṣya on the Brahma-sūtras (*paśvādibhiḥ cāviśeṣāt-1-1-1*) to some author different from the Bhāṣyakāra, who amplified that statement in the following expository paragraph beginning with the words "*yathā hi paśvādayaḥ*". Students of Indian logic will do well to remember that Vātsyāyana is the earliest known writer who drew pointed attention to the reason why Gautama's Nyāya came to be regarded as the science of epistemology and logic (*Pramāṇa-śāstra*, *Ānvīkṣikī* or *Nyāya-śāstra*). It is worth remembering, in this connection, that Vātsyāyana



xxxviii A PRIMER OF INDIAN LOGIC [PART I

indicates in the very first sentence of his *Bhāṣya* how valid thinking (*pramā*) and fruitful doing (*arthakriyā*) serve as each other's axle in each other's wheelings and how they constitute *real living* with all its complexity in the pluralistic universe of the Nyāya-Vaiśeṣika realism. It is also worth noting that it is Vātsyāyana who first explained how the entire epistemological scheme of *Pramāṇas* could be synthesised in a valid syllogistic expression, (*vide* pages 30 to 42 of his *Bhāṣya* on 1-1-1 Chaukhamba edition) and how, for this reason, logic proper justly came to exercise a profound influence over the whole realm of philosophical thought in India..

About the end of the sixth century A. D. or in the former half of the seventh century, Uddyotakara wrote his *Nyāya-vārtika*, the earliest extant commentary on the *Nyāya-bhāṣya*. Some scholars like Dr. Keith maintain that Uddyotakara was a contemporary of the Buddhist logician Dharmakīrti. Hsuen-tsang (629-645 A. D.) does not speak of Dharmakīrti, while I-tsing (671-695 A.D.) refers to him. The reference in the *Nyāya-vārtika* to a *Vāda-vidhi* (page 117 line 21, Chowkhamba edition) is the only argument relied upon



for showing that Uddyotakara is not earlier than Dharmakīrti. This argument assumes that Dharmakīrti is the author of the *Vāda-vidhi*. Sufficient evidence has not been adduced in support of the view that the *Vāda-vidhi* is one of Dharmakīrti's works. Chinese tradition definitely lends support to the identification of the *Vāda-vidhi* with one of Vasubandhu's works. Further, in the Vārtika on 1-1-4, Dignāga's definition of perception is criticised; and it is generally accepted by Brahmanical and Buddhistic authorities alike that Dharmakīrti was responsible for the introduction of the additional word *abhrānta* in that definition, chiefly with a view to meeting the objections raised by Uddyotakara against it. These considerations tend to show that it would be reasonable to assign Uddyotakara to the end of the sixth or the beginning of the seventh century A.D. and to assign Dharmakīrti to about the third quarter of the seventh century A. D. Uddyotakara's great service to Nyāya consists in his successful endeavour to lift it up from the slough into which it was thrown by Dignāga's confutation of Vātsyāyana's Bhāṣya. After Uddyotakara, the philosophical contest between the anti-Vedic and pro-Vedic sides of the Nyāya thought was keenly



CSL

A PRIMER OF INDIAN LOGIC [PART I

carried on by great Buddhistic logicians like Dharmakīrti, Dharmottara and Ratnakīrti and eminent Brahmanical logicians like Vācaspatimiśra, Jayantabhaṭṭa, Bhāsarvajña and Udayana. Vācaspati has himself given 841 A. D. as the date of the composition of his index to Gautama's sūtras, called *Nyāya-sūcī-nibandha*. Vācaspati is famous for his polymathic learning and dispassionate philosophical outlook. He is the author of many important and authoritative treatises, mainly in the nature of expository and critical commentaries, on almost all the systems of Indian philosophy. His *Brahma-tattva-samīkṣā* on Maṇḍanamīśra's *Brahmasiddhi* and *Bhāmatī* on Śaṅkara's *Brahmasūtra-bhāṣya* represent the Advaita system; his *Sāṃkhya-tattva-kaumudī* and *Yoga-bhāṣya-vaiśārādī* represent the Sāṃkhya-Yoga system; and his *Nyāya-sūcī-nibandha* and *Nyāya-vārtika-tātparya-ṭīkā* represent the Nyāya system. There is evidence to show that *Bhāmatī* should have been his latest work. In his *Nyāya-vārtika-tātparya-ṭīkā*, he renders intelligible the difficult portions of the *Nyāya-vārtika* and incidentally discusses several obscure portions of the *Nyāya-bhāṣya* and the *Nyāya-sūtras*, in accordance with the Nyāya tradition handed down to him by his



Nyāya teacher—Trilocana. For the monumental contribution which he made to Nyāya in his *Tātparyā-ṭīkā*, he came to be known as the Tātparyācārya in Nyāya literature. He justly claims, in his *Tātparyā-ṭīkā*, special credit for having redeemed from oblivion Uddyotakara's work, which came to be regarded very old and nearly forgotten in the ninth century A. D. Jayantabhaṭṭa, who presupposes Vācaspati in his work and refers to Ānandavardhana's *Dhvanyāloka* (*Vide* page 48 lines 21 to 25-Nyāyamañjarī, Benares), should be taken to be later than the middle of the ninth century A. D.; and with the help of the particulars furnished by Jayanta's son, Abhinanda, in the *Kādambarīkāthāsāra*, Jayanta may be assigned to the third quarter of the ninth century A. D. Jayanta's chief contribution to Nyāya is his *Nyāya-mañjarī*. This work is of the nature of an elaborate *vṛtti* (expository gloss) on select sūtras of Gautama. Jayanta himself says that the *Nyāya-mañjarī* was so well appreciated by his contemporaries that he came to be recognised as the *Vṛtti-kāra* of Nyāya. Bhāsarvajña, who flourished perhaps about the beginning of the tenth century A. D., is the author of an important Nyāya work called *Nyāya-sāra*; and the distinctive



A PRIMER OF INDIAN LOGIC [PART I]

feature of this work is its epistemology which deviates in certain respects from established Nyāya tradition, as, for instance, in discarding *uṣamāna* as a distinct Pramāṇa and in recognising six *hetvābhāsas* including *anadhyavasita*. Udayanācārya is the greatest Naiyāyika of the tenth century A. D. At the end of one of his works, *Lakṣaṇāvalī*, he has given 984 A. D. as the date of its composition. Besides his erudite commentaries on Praśastapāda's Bhāṣya and Vācaspati's *Tātparyā-ṭīkā*—*Kiraṇāvalī* and *Tātparyā-pariśuddhi*, he wrote three important Nyāya works — the *Prabodhasiddhi* otherwise called *Nyāya-pariśiṣṭa*, the *Ātma-tattva-viveka*—otherwise called *Bauddha-dhikkāra* and the *Nyāya-kusumāñjali*. The first of these three works contains an elucidative and illustrative exposition of the subtleties of *jāti* (futile respondence) and *nigrahassthāna* (vulnerable points) in accordance with the dialectics of early Nyāya. The *Ātma-tattva-viveka* is a brilliant exposition of the Nyāya metaphysics with particular reference to the Nyāya conception of the *self* (*jīva*) and contains a forcible refutation of the Buddhistic doctrines of momentariness (*kṣaṇa-bhaṅga*) and voidness (*śūnya*). The *Kusumāñjali* is Udayana's masterpiece. It is devoted to a refutation of the

anti-theistic theories maintained by the Vedistic, Sāṃkhya, nihilistic and naturalistic schools of his age and to the amplification and vindication of the Nyāya theism, chiefly on the basis of the creationistic view of causation. Udayana's theistic argument consists of two main parts :—one part arguing *towards* values, design and causation in the sense of creation and the other part arguing *to* God *from* values, design and creation. His monumental contribution to Indian theism has secured for him the high rank of Nyāyācārya. From the references given on page 21 of the Sanskrit introduction to the *Kandalī* (Vizianagaram Sanskrit Series), it may be safely concluded that Udayana was a contemporary of Śrīdhara.

SECTION VII.

AFTER UDAYANA TO ANNAMBHATTA.

Śivādityamiśra's *Saptapadārthī* is a short and simple manual setting forth the essentials of the Vaiśeṣika system chiefly in accordance with Praśastapāda's Bhāṣya. It also makes use of the Nyāya material in Bhāsarvajña's *Nyāya-sāra*, to some extent. Śivāditya's text giving his scheme of six fallacious types of *probans* with *anadhyavasita*



corresponding to *asādhāraṇa* (uncommon *probans*) as a distinct type, is practically a reproduction of the corresponding text of Bhāsarvajña. (Compare page 23, *Saptapadārthī*—Vizianagaram Sanskrit Series, with page 25 in the *Nyāyasāra*—Poona, the Oriental Books Supplying Agency). A careful comparison of Śivāditya's *Saptapadārthī* with Udayana's *Kiraṇāvalī* would lead one to believe that the *Saptapadārthī* utilised the material in the *Kiraṇāvalī*. For instance, the definition of darkness on page 71 of *Saptapadārthī* appears to presuppose Udayana's remarks about darkness on pages 111 and 112 of the *Kiraṇāvalī* (Bibliotheca Indica); the definition of *jāti* on page 70 of the *Saptapadārthī* appears to presuppose Udayana's enumeration of *jātibādhakas* on page 161 of the *Kiraṇāvalī* and the definition of *lakṣaṇa* (definition) found on page 192 of the *Kiraṇāvalī* is reproduced on page 35 of the *Saptapadārthī*. Śrī Harṣa, the author of the *Khaṇḍanakhaṇḍakhādyā*, and Gaṅgeśa, the author of the *Tattvacintāmaṇi*, undoubtedly refer to Śivāditya. (Vide introduction to the *Saptapadārthī*—page 2.) On these grounds, it would not be unreasonable to assign the *Saptapadārthī* to the eleventh century A. D. (circa). The importance of the *Saptapadārthī* lies in the fact that



later writers like Annambhaṭṭa used it as their model for their primers of Nyāya, as may be unmistakably made out from the close correspondence between several portions in the *Saptapadārthī* and primers like the *Tarkasaṃgraha*.

The greatest Nyāya work, which was written after Udayana, is the *Tattvacintāmaṇi* by Gaṅgeśa-pādhyāya. In this monumental work, Gaṅgeśa utilised all the constructive, expository, critical and polemical material in the earlier works on Nyāya and Vaiśeṣika and gave the final shape and turn to the logic and metaphysics of Nyāya. In treating the various topics of Nyāya, the earlier writers usually adopted the *categoristic* method, which was inaugurated by Gautama. This method as expounded by Vātsyāyana, consists in enumeration and classification (*uddeśa* and *vibhāga*), definition (*lakṣaṇa*), careful investigation and discussion (*parīkṣā*). Varadarāja's *Tārkikarakṣā* (1100 A. D. circa) is the latest important work on Nyāya, which adopts the old *categoristic* method in accordance with the Nyāya-sūtras and Bhāṣya. It was Gaṅgeśa who replaced this old method by what may be described as the *epistemological* method or the *pramāṇa* method, which definitely shifted



CSL

xvi

A PRIMER OF INDIAN LOGIC [PART I

the emphasis from the categoristic treatment of the topics (*padārthāḥ*) of Nyāya to the epistemological treatment of the four means of valid cognition (*pramāṇāni*) recognised by the Naiyāyikas. Thus, the Nyāya-śāstra, which had remained hitherto a mere *padārtha-śūtra*, for all practical purposes, was turned into a full-fledged *pramāṇa-śūtra* in Gaṅgeśa's *Tattvacintāmaṇi*; and in this partly lies the epoch-making character of this monumental work on Nyāya. That the *Tattvacintāmaṇi* serves as the basic work on which the whole literature of what is commonly known as *navya-nyāya* (modern Nyāya) rests is also another reason for regarding it as an epoch-making work. The *Tattvacintāmaṇi*, or the *Maṇi* as it is popularly known, consists of four main divisions represented by the four chapters (*khaṇḍa*) on perception (*pratyakṣa*), inference (*anumāna*), assimilation in the sense of analogising (*upamāna*), and verbal testimony (*śabda*). In the course of an elaborate elucidation and discussion of the nature and objective reach and content of these four *Pramāṇas*, the relevant topics of the Nyāya-Vaiśeṣika system are considered in the *Maṇi* in comparison with the kindred topics of other philosophical systems. The language of Gaṅgeśa's *Maṇi* is also



of an epoch-making type. Such of the modern students of Nyāya literature as are not equipped with the required control over the terminology of *navya-nyāya* are apt to indulge in the ill-conceived criticism that the language of the *Maṇi* and the connected works is spoiled by a huge over-growth of inflated and hair-splitting logic-chopping. The key to *navya-nyāya* is its terminology. Those who have controlled this terminology are sure to find in the *Maṇi* and allied works a discipline of unique subtlety and value. The history of philosophical thought shows that lack of precision in expression seriously hampers its progress. In Indian thought, this defect was sought to be remedied by Naiyāyikas like Gaṅgeśapādhyāya through several thought-measuring devices, which chiefly consisted of formulas in Sanskrit constructed with the aid of terms like *avacchedaka* (the delimitor), *avacchedya* (the delimited), *nirūpaka* (co-forming), *nirūpya* (co-formed), *anuyogin* (containing correlate) and *pratiyogin* (the other correlate or counter-correlate). All the Indian dialecticians, who wrote after Gaṅgeśapādhyāya, were influenced by the thought-measuring formulas used by Gaṅgeśa. By using such formulas, it was possible for later dialectics in Indian philosophical



xlvi A PRIMER OF INDIAN LOGIC [PART I

literature to achieve a remarkable degree of quantitative precision in measuring the *extent* (temporal and spatial), *content* and *intent* (purpose and potency) of cognition (*jñāna*).

Gaṅgeśa quotes Śrī Harṣa (the *Khaṇḍanakāra*) and refutes his view (page 233 of the *Mañi—anu-māna*, Bibliotheca Indica). There is sufficient evidence in favour of assigning Śrī Harṣa to 1163 A. D. circa. Pakṣadharamiśra, otherwise known as Jayadeva, wrote a commentary called *Āloka* on the *Mañi*. This Jayadeva is believed to be identical with Jayadeva, the author of the *Prasannarāghava*. A verse from this drama (*kadalī kadalī* etc., 1-37) is quoted in the *Sāhityadarpaṇa*, as pointed out by Mr. P. V. Kane in his introduction to the latter work. Thus Pakṣadharamiśra, *alias* Jayadeva, must have been considerably earlier than the *Sāhityadarpaṇa* (1300 A. D. circa). These facts will show that it would not be reasonable to assign Gaṅgeśa to any date much earlier than 1200 A. D. and that he may be assigned to the former half of the thirteenth century A. D.

Vardhamānopādhyāya, the only son of Gaṅgeśa according to tradition, was also a reputed Naiyāyika of this period. He wrote several learned and illuminating works, generally known as *Prakāśa*, in



the form of commentaries on Udayana's treatises, Gaṅgeśa's *Maṇi* and Vallabhācārya's *Nyāyalīlāvātī*. Jayadeva's pupil, Rucidatta, was a logician of considerable repute and was the author of a well-known commentary called *Makaranda* on Vardhamāna's *Prakāśa*.

The end of the fifteenth century, as also the sixteenth and seventeenth centuries, may well be described as marking the heyday of Nyāya dialectics in Nuddea (Navadvīpa, Bengal). Vāsudeva-Sārva-bhauma was the greatest Naiyāyika, who flourished about the end of the 15th and the earlier part of the 16th century. He had the unique privilege and glory of having taught Nyāya to four of the greatest personalities of the 16th century: *viz.*—Caitanya, the greatest Vaiṣṇava teacher and reformer of Bengal in the 16th century; Raghunātha, otherwise known as *Tārkika-śiromaṇi* (the crest-jewel of all logicians); Raghunandana, a famous Bengal lawyer; and Kṛṣṇānanda, a reputed *tāntrika*, who was a great authority on the different forms and charms of the Śākta cult. Raghunātha (*Tārkika-śiromaṇi*) was admittedly the greatest logician of the sixteenth century. He wrote several treatises on Nyāya, mostly in the form of commentaries and the greatest



A PRIMER OF INDIAN LOGIC [PART I

and the most famous of his works is the *Dīdhiti*, an expository and critical commentary on Gaṅgeśa's *Maṇi*. Mathurānātha was the most famous of Raghunātha-śromaṇi's pupils and wrote authoritative commentaries on the *Maṇi* and the *Dīdhiti*. Jagadīśa and Gadādhara were the greatest exponents of *navya-nyāya* as represented by the *Maṇi* and the *Dīdhiti*, and flourished in the earlier part of the seventeenth century. Jagadīśa is famous as the author of the commentary on the *Dīdhiti*, popularly known as *Jāgadiśī*, the *Śabdaśaktiprakāśikā*—an independent treatise on the speculative Semantics of Nyāya, a short manual called the *Tarkāmṛta* and a commentary called the *Bhāṣya-sūkti* on the Bhāṣya of Praśastapāda. Gadādhara is famous as the author of the commentary, popularly known as the *Gādādhari*, on the *Dīdhiti*, the commentary called the *Mūlagādādhari* on portions of the *Maṇi*, commentaries on Udayana's *Ātmatativaviveka*, and fifty-two dialectic tracts and treatises—such as the *Vyūtpattivāda* and *Śaktivāda* (dialectic treatises on the speculative Semantics of Nyāya). The more important works of Jagadīśa and Gadādhara are still studied carefully by those students who seek to specialise in *navya-nyāya* and they are regarded as constituting



an indispensable discipline of high value to every scholar who wishes to be recognised as a sound *śāstrin*. The dialectic literature of later Nyāya is a vast *banian tree*, which had its roots struck deep and its huge trunk fully developed in Mithilā in the *Tattvacintāmaṇi*, had its immense branches and foliage stretched out and ramified in the *Dīdhiti* in Nuddea, and bore fruit in the rich fruitage of *Jāgadīśi* and *Gādādhari*, which formed the colossal monument of Indian dialectics in the seventeenth century. If Raghunātha is regarded as the crest-jewel (*śiromaṇi*) of logical dialecticians, Gadādhara may well be characterised as the prince of Nuddea dialecticians, who wears the diadem inlaid with this brilliant crest-jewel.

In the latter part of the seventeenth century, the Nyāya scholars interested themselves chiefly in the interpretation of the earlier and later works on Nyāya and in the production of introductory handbooks. Three of such scholars may be mentioned here—Śaṅkara-miśra, Viśvanātha-pañcānana and Annambhaṭṭa. Śaṅkara-miśra wrote a commentary on the *Jāgadīśi* and a comprehensive commentary called the *Upaskāra*, on Kaṇāda's sūtras. Viśvanātha-pañcānana wrote a commentary on the Nyāya-



A PRIMER OF INDIAN LOGIC [PART I

sūtras in 1634; and he is famous as the author of the popular hand-book of the Nyāya-Vaiśeṣika system, called the *Bhāṣāpariccheda* or *Kārikāvalī*, which consists of 168 easy verses. The *Kārikāvalī* is accompanied by the author's own commentary called the *Nyāyasiddhāntamuktāvalī*. According to the traditional methods of study, the *Muktāvalī* is widely studied by students of Nyāya, immediately after finishing the study of Annambhaṭṭa's *Tarkasamgraha* and *Dīpikā*.

Annambhaṭṭa was an Andhra scholar who flourished in the latter part of the seventeenth century. He was a versatile scholar and a reputed polymath. He wrote several learned works on almost all the important branches of Śāstraic learning. In this connection, attention may be invited to some of Annambhaṭṭa's known works. In the sphere of Pūrvamīmāṃsā and Vedānta, he is known as the author of the massive commentary called the *Rāṇakojjīvanī* on Bhaṭṭasomeśvara's *Nyāya-sudhā*, otherwise known as *Rāṇaka*, and of a commentary on the Brahma-sūtras. In Vyākaraṇa, he is famous as the author of an easy commentary on Pāṇini's *Aṣṭādhyāyī* and of an extensive commentary called *Uddyotana* on Kaiyaṭa's *Pradīpa*. In the sphere of the Nyāya-Vaiśeṣika



system, he wrote a learned commentary called *Siddhāñjana* on Jayadeva's *Maṇyāloka*, as also the most popular handbook of Indian logic, called the *Tarkasaṃgraha* and its expository and supplementary gloss called the *Dīpikā*. The name *Tarkasaṃgraha* is interpreted by Annambhaṭṭa himself as a compendious elucidation of the nature of substance, qualities and such other ontological categories of the Vaiśeṣika system, which are accepted by Nyāya. These two works—the *Tarkasaṃgraha* and the *Dīpikā*—fulfil the object mentioned in the concluding verse of the *Tarkasaṃgraha* (see page 346—part III) and are described by some as *miniature Gāḍādhari* (*Bālagādādhari*), in the sense that they, taken together, ^{said to}miniature the later Nyāya dialectics also.

SECTION VIII.

CONCLUDING REMARKS.

The Nyāya-Vaiśeṣika system, doctrinally liberal, the rationalistic tendency of the *śāstra* (finality). The original current of rationalistic thought came to be broken into two streams, the *Vedistic* Nyāya and the *anti-Vedistic* Vaiśeṣika. After some time, there was a rapprochement between these two schismatic developments. The Vaiśeṣika emphasis on the inductive side of reasoning, together with its realism



CSL

liv

A PRIMER OF INDIAN LOGIC [PART I

and pluralism, served as the basis for the development of the Nyāya theory of deductive reasoning through a well-defined scheme of syllogistic expression. All along, the Vaiśeṣika and the Nyāya have been treated as sister systems (*samāna-tantra*) with a common rationalistic stress and realistic background, in spite of certain epistemological and ontological differences. The Nyāya-Vaiśeṣika is a self-contained system of philosophy. Its roots strike deep into its pluralistic realism. Its scheme of external relation, its theory of truth and error, and its creationistic view of causation (see pages 62 to 66, 146 to 180 and 190 to 211-part III) constitute its mainstay. Its thought-measuring devices and precise formulas form its ever-spreading and never-fading foliage. Its fruit is the virile, though negativistic, doctrine of *abhāva* (non-existence) and *aparigraha* (non-attachment). Its chief solace and comfort is its pantheistic theism, with its demi-urgic, omnipotent and omniscient *Īśvara*. Its chief boast is its logical and dialectic machinery, which the believers and the heretics alike, the *Āstikas* and the *Nāstikas* alike, cannot do without. Whoever knows Nyāya, knows the *pramāṇa*—is a *pramāṇavil*, a philosopher in the strict sense, according to Indian tradition.



CSL

॥ श्रीः ॥

॥ तर्कसंग्रहः ॥

A PRIMER OF INDIAN LOGIC

PART II.

TEXT

प्रत्यक्षपरिच्छेदः

1. निधाय हृदि विश्वेशं विधाय गुरुवन्दनम् ।

बालानां सुखबोधाय क्रियते तर्कसंग्रहः ॥

2. द्रव्य-गुण-कर्म-सामान्य-विशेष-समवायाभावाः
 सप्त पदार्थाः ॥

3. (a) तत्र द्रव्याणि पृथिव्यप्-तेजो-वाय्वाकाश-
 काल-दिग्-आत्म-मनांसि नवैव ॥

(b) रूप-रस-गन्ध-स्पर्श-संख्या--परिमाण-पृथ-
 कत्व-संयोग-विभाग-परत्वापरत्व-गुरुत्व - द्रवत्व - स्नेह-शब्द-
 बुद्धि-सुख-दुःखेच्छा-द्वेष-प्रयत्न-धर्माधर्म-संस्काराः चतु-
 विंशतिर्गुणाः ॥

(c) उत्क्षेपणावक्षेपणाकुञ्चन-प्रसारण--गमनानि
 पञ्च कर्माणि ॥

(d) परम् अपरं चेति द्विविधं सामान्यम् ॥

(e) नित्यद्रव्यवृत्तयो विशेषास्तु अनन्ता एव ॥

(f) समवायस्तु एक एव ॥

PRATYAKṢA-PARICCHEDAḤ.

1. Nidhāya hṛdi viśveśam vidhāya guruvandanam.

Bālānām sukhabodhāya kriyate tarkasaṁgrahaḥ.

2. Dravya-guṇa-karma-sāmānya-viśeṣa-samavāyābhāvāḥ sapta padārthāḥ.

3. (a) Tatva dravyāṇi pṛthivyap-tejo-vāyvākāśa-kāla-dik-ātma-manāṁsi navaiva.

(b) Rūpa-rasa-gandha-sparśa-saṅkhyā-parimāṇa-pṛthaktva-samyoga-vibhāga-paratva-aparatva-gurutva - dravatva - snehā-śabda - buddhi - sukha-duḥkha - icchā - dveṣa - prayatna - dharmādharma-saṁskārāḥ caturviṁśatirguṇāḥ.

(c) Utkṣepaṇa-avakṣepaṇa-ākuñcana-prasāraṇa-gamanāni pañca karmāṇi.

(d) Param, āparaṇi ceti dvividham sāmānyam.

(e) Nityadravyavṛttayo viśeṣastu anantā eva.

(f) Samavāyastu eka eva.

(g) अभावः चतुर्विधः, प्रागभावः, प्रध्वंसा-
 भावः, अत्यन्ताभावः, अन्योन्याभावश्च इति ॥

4. तत्र गन्धवती पृथिवी । सा द्विविधा, नित्या
 अनित्या च । नित्या परमाणुरूपा । अनित्या कार्यरूपा । पुनः
 त्रिविधा, शरीरेन्द्रियविषयभेदात् । शरीरमस्मदादीनाम् ।
 इन्द्रियं गन्धग्राहकं घ्राणम्, तच्च नासाग्रवर्ति । विषयो
 मृत्पाषाणादिः ॥

5. शीतस्पर्शवत्यः आपः । ताः द्विविधाः, नित्याः
 अनित्याश्च । नित्याः परमाणुरूपाः । अनित्याः कार्यरूपाः ।
 पुनः त्रिविधाः, शरीरेन्द्रियविषयभेदात् । शरीरं वरुण-
 लोके । इन्द्रियं रसग्राहकं रसनं जिह्वाग्रवर्ति । विषयः
 सरित्-समुद्रादिः ॥

6. उष्णस्पर्शवत् तेजः । तच्च द्विविधम्, नित्य-
 मनित्यं च । नित्यं परमाणुरूपम् । अनित्यं कार्यरूपम् ।
 पुनः त्रिविधम् शरीरेन्द्रियविषयभेदात् । शरीरम् आदि-
 त्यलोके प्रसिद्धम् । इन्द्रियं रूपग्राहकं चक्षुः कृष्णताराग्र-
 वर्ति । विषयः चतुर्विधः, भौम-द्रव्यौदर्याकरजभेदात् ।
 भौमं वह्न्यादिकम् । अविन्धनं दिव्यं विद्युदादि । भुक्तस्य
 परिणामहेतुरौदर्यम् । आकरजं सुवर्णादि ॥

(g) *Abhāvaḥ caturvidhaḥ, prāgabhāvaḥ, pradhvaṁsābhāvaḥ, atyantābhāvaḥ, anyonyābhāvaśca iti.*

4. *Tatra gandhavatī pṛthivī. Sā dvividhā, nityā, anityā ca. Nityā paramāṇurūpā. Anityā kāryarūpā. Punah trividhā, śarīra-indriya-viśaya-bhedāt. Śarīram asmadādīnām. Indriyaṁ gandha-grāhakaṁ ghrāṇam, tacca nāsāgravartī. Viśayo nṛtīpāṣānādih.*

5. *Śīlasparśavatyah āpaḥ. Tāḥ dvividhāḥ, nityāḥ, anityāśca. Nityāḥ paramāṇurūpāḥ. Anityāḥ kāryarūpāḥ. Punah trividhāḥ, śarīra-indriya-viśayabhedāt. Śarīram varuṇaloke. Indriyaṁ rasagrāhakaṁ rasanāṁ jihvāgravartī. Viśayah sarit-samudrādih.*

6. *Uṣṇasparśavat tejah. Tacca dvividham, nityam anityam ca. Nityam paramāṇurūpam. Anityam kāryarūpam. Punah trividham, śarīra-indriya-viśayabhedāt. Śarīram ādityaloke prasiddham. Indriyaṁ rūpagrāhakaṁ cakṣuḥ kṛṣṇatārāgravartī. Viśayah caturvidhaḥ, bhauma-divya-udarya-ākarajabhedāt. Bhaumaṁ vahnnyādikaṁ. Abhīndhanam divyam vidyudādī. Bhuktasya parī-nāmaheturaudaryam. Ākaraṇam suvarṇādī.*

A PRIMER OF INDIAN LOGIC

7. रूपरहितः स्पर्शवान् वायुः । स द्विविधः नित्यः अनित्यश्च । नित्यः परमाणुरूपः । अनित्यः कार्यरूपः । पुनः त्रिविधः शरीरेन्द्रियविषयभेदात् । शरीरं वायुलोके । इन्द्रियं स्पर्शग्राहकं त्वक् सर्वशरीरवर्ति । विषयो वृक्षादिकम्पनहेतुः । शरीरान्तःसंचारी वायुः प्राणः । स च एकोऽपि उपाधिभेदात् प्राणापानदिसंज्ञां लभते ॥

8. शब्दगुणकमाकाशम् । तच्च एकं, विभु, नित्यं च ॥

9. अतीतादिव्यवहारहेतुः कालः । स च एको विभुः नित्यश्च ॥

10. प्राच्यादिव्यवहारहेतुः दिक् । सा च एका विम्बी नित्या च ॥

11. ज्ञानाधिकरणमात्मा, स द्विविधः, जीवात्मा परमात्मा चेति । तत्र ईश्वरः सर्वज्ञः परमात्मा एक एव । जीवस्तु प्रतिशरीरं भिन्नो विभुः नित्यश्च ॥

12. सुखाद्युपलब्धिसाधनमिन्द्रियं मनः । तच्च प्रत्यात्मनियतत्वात् अनन्तं, परमाणुरूपं, नित्यं च ॥

13. चक्षुर्मात्रग्राह्यो गुणो रूपम् । तच्च शुक्ल-नील-पीत-रक्त-हरित-कपिश-चित्तभेदात् सप्तविधम् । पृथिवी-जल-तेजोवृत्तिः । तत्र पृथिव्यां सप्तविधम् । अभास्वरशुक्लं जले । भास्वरशुक्लं तेजसि ॥

PRATYAKṢA-PARICCHEDAḤ

7

7. Rūparahitaḥ sparśavān vāyuh. Sa dvividhaḥ, nityaḥ, anityaśca. Nityaḥ paramānurūpaḥ. Anityaḥ kāryarūpaḥ. Punaḥ trividhaḥ, śarīra-indriya-viśayabhedāt. Śarīraṁ vāyuloke. Indriyaṁ sparśagrāhakaṁ tvak sarvaśarīravartī. Viśayo vṛkṣūdikampanahetutḥ. Śarīrāntaḥ-saṁcārī vāyuh prāṇaḥ. Sa ca ekopi upādhibhedāt prāṇā-pānūdi samjñān labhatē.

8. Śabdaguṇakam ākāśam. Tacca ekam, vibhu, nityam ca.

9. Atītādivyavahārahetuḥ kālaḥ. Sa ca eko vibhuḥ nityaśca.

10. Prācyādivyavahārahetuḥ dik. Sā ca ekā vibhū nityā ca.

11. Jñānādhikaraṇam ātmā. Sa dvividhaḥ, jīvātmā-paramātmā ceti. Tatra Īśvaraḥ paramātmā eka eva. Jīvastu pratiśarīram bhīno vibhuḥ nityaśca.

12. Sukhādyupalabdhisādhanaṁ indriyaṁ maṇaḥ. Tacca pratyātmanīyatatvāt anantaṁ, paramānurūpam, nityam ca.

13. Cakṣurmātragrāhyo guṇo rūpam. Tacca śukla--nīla--pīta--rakta--harita--kāpiśa--citrabhedāt sapta-vidham. Pṛthivī-jala-tejovṛtti. Tatra pṛthivyām sapta-vidham. Abhāsvaraśuklaṁ jāle. Bhāsvaraśuklaṁ tejasi.

A PRIMER OF INDIAN LOGIC

14. रसनग्राह्यो गुणो रसः । स च मधुराम्ल-
 लवण-कटु-कषाय-तिक्तभेदात् षड्विधः । पृथिवी-जलवृत्तिः ।
 तत्र पृथिव्यां षड्विधः । जले मधुर एव ॥

15. घ्राणग्राह्यो गुणो गन्धः । स द्विविधः, सुरभिः
 असुरभिश्च । पृथिवीमातृवृत्तिः ॥

16. त्वगिन्द्रियमात्रग्राह्यो गुणः स्पर्शः । स च
 त्रिविधः । शीतोष्णानुष्णाशीतभेदात् । पृथिव्यप्तेजो-
 वायुवृत्तिः । तत्र शीतः जले । उष्णः तेजसि । अनुष्णा-
 शीतः पृथिवीवाय्वोः ॥

17. रूपादिचतुष्टयं पृथिव्यां पाकजमनित्यं च ।
 अन्यत्र अपाकजं नित्यमनित्यं च । नित्यगतं नित्यम् ।
 अनित्यगतमनित्यम् ॥

18. एकत्वादिव्यवहारहेतुः संख्या । सा नवद्रव्य-
 वृत्तिः, एकत्वादिपरार्धपर्यन्ता । एकत्वं नित्यमनित्यं च ।
 नित्यगतं नित्यम् । अनित्यगतमनित्यम् । द्वित्वादिकं तु
 सर्वत्र अनित्यमेवं ॥

19. मानव्यवहारकारणं परिमाणम् । नवद्रव्यवृत्तिः ।
 तच्चतुर्विधम्, अणु महत् दीर्घं ह्रस्वं चेति ॥

20. पृथग्व्यवहारकारणं पृथक्त्वम् । सर्व-
 द्रव्यवृत्तिः ॥

PRATYAKṢA-PARICCHEDAḤ

14. Rasanagrāhyo guṇo rasah. Sa ca madhura-- āmla--lavaṇa--kaṭu--kaṣāya--tikṭabhedāt ṣaḍvidhaḥ. Pṛthivī-jalavṛttih. Tatra pṛthivyām ṣaḍvidhaḥ. Jale madhura eva.

15. Ghrāṇagrāhyo guṇo gandhaḥ. Sa dvividhaḥ, surabhiḥ asurabhiśca. Pṛthivīmātravṛttih.

16. Tvagindriyamātragrāhyo guṇaḥ sparśah. Sa ca trividhaḥ, śīta-uṣṇa-anuṣṇāśītabhedāt. Pṛthivyap-tejo-vāyuvṛttih. Tatra śītaḥ jale. Uṣṇaḥ tejasi. Anuṣṇāśītaḥ pṛthivīvāyvoḥ.

17. Rūpādicatuṣṭayam pṛthivyām pākajam anityam ca. Anyatra apākajam nityam anityam ca. Nityagatam nityam. Anityagatam anityam.

18. Ekatvādivyavahārahetuḥ saṅkhyā. Sā navadravyavṛttih, ekatvādi-parārdhāparyantā. Ekatvam nityam anityam ca. Nityagatam nityam. Anityagatam anityam. Dvitrādikam tu sarvatra anityameva.

19. Mānavyavahārakāraṇam parimāṇam, Navadravyavṛtti. Taccaturvidham, aṇu, mahat, dīrgham, hrasvam celi.

20. Pṛthagvyavahārakāraṇam pṛthaktvam, Sarvadravyavṛtti.

A PRIMER OF INDIAN LOGIC

21. संयुक्तव्यवहारेहेतुः संयोगः । सर्वद्रव्यवृत्तिः ॥

22. संयोगनाशको गुणो विभागः । सर्वद्रव्यवृत्तिः ॥

23. परापरव्यवहारासाधारणकारणे परत्वापरत्वे ।
 पृथिव्यादिचतुष्टयमनोवृत्तिनी । ते द्विविधे, दिक्कृते
 कालकृते च । दूरस्थे दिक्कृतं परत्वम् । समीपस्थे दिक्कृ-
 तम् अपरत्वम् । ज्येष्ठे कालकृतं परत्वम् । कनिष्ठे कालकृतम्
 अपरत्वम् ॥

24. आद्यपतनासमवायिकारणं गुरुत्वम्, पृथिवी-
 जलवृत्ति ॥

25. आद्यस्यन्दनासमवायिकारणं द्रवत्वम्, पृथिव्य-
 स्तेजोवृत्ति । तद्द्विविधम्, सांसिद्धिकं नैमित्तिकं च । सांसि-
 द्धिकं जले । नैमित्तिकं पृथिवीतेजसोः । पृथिव्यां घृतादा-
 वग्निसंयोगजं द्रवत्वम् । तेजसि सुवर्णादौ ॥

26. चूर्णादिपिण्डीभावहेतुः गुणः स्नेहः, जल-
 मात्रवृत्तिः ॥

27. श्रोत्रग्राह्यो गुणः शब्दः, आकाशमात्रवृत्तिः ॥
 स द्विविधः, ध्वन्यात्मकः वर्णात्मकश्च । तत्र ध्वन्यात्मकः
 भेर्यादौ । वर्णात्मकः संस्कृतभाषादिरूपः ॥

PRATYAKṢA-PARICCHEDAḤ

11

21. Saṁyuktavyavahārahetuḥ saṁyogaḥ.
 Sarvadravyavṛttiḥ.

22. Saṁyoganāśako guṇo vibhāgaḥ. Sarvadra-
 vyavṛttiḥ.

23. Parāparavyavahārāsūdhāraṇakāraṇe pa-
 ratvāparatve. Pṛthivyādicatuṣṭayamanovṛttinī.
 Te dvividhe, dikṛte kālakṛte ca. Dūrasthe dikṛ-
 taṁ paratvam. Samīpasthe dikṛtaṁ aparatvam.
 Jyeṣṭhe kālakṛtaṁ paratvam. Kaniṣṭhe kālakṛtaṁ
 aparatvam.

24. Ādyapatanāsamavāyikāraṇaṁ gurutvam,
 pṛthivījalavṛtti.

25. Ādyasyandanāsamavāyikāraṇaṁ dravat-
 vam, pṛthivyaptejovṛtti. Taddvividham, sāmsiddhi-
 kaṁ, naimittikaṁ ca. Sāmsiddhikaṁ Nai-
 mittikaṁ pṛthivītejasoḥ. Pṛthivyāṁ gni-
 saṁyogajaṁ dravatvam. Tejasi suvarṇādan.

26. Cūrṇādipiṇḍībhāvaḥetuḥ guṇaḥ snehaḥ,
 jalamātravṛttiḥ.

27. Śrotagrāhyo guṇaḥ śabdaḥ, ākāśa-
 mātravṛttiḥ. Saḥ dvividhaḥ, dhvanyātmakaḥ varṇāt-
 makaśca. Tatra dhvanyātmakaḥ bheryādan. Varṇāt-
 makaḥ saṁskṛtabhūṣādirūpaḥ.

28. (a) सर्वव्यवहारहेतुः ज्ञानम् बुद्धिः । सा द्विविधा, स्मृतिः अनुभवश्च ॥

(b) संस्कारमात्रजन्यं ज्ञानं स्मृतिः ॥

(c) तद्विन्नं ज्ञानमनुभवः । स द्विविधः, यथार्थः अयथार्थश्च ॥

(d) तद्वति तत्प्रकारकः अनुभवः यथार्थः । सैव प्रमा इत्युच्यते ॥

(e) तदभाववति तत्प्रकारकः अनुभवः अयथार्थः ॥

(f) यथार्थानुभवः चतुर्विधः, प्रत्यक्षानुमित्युपमितिशाब्दभेदात् ॥

(g) तत्करणमपि चतुर्विधम्, प्रत्यक्षानुमानोपमानादौ ॥

योगजः (a) असाधारणं कारणं करणम् ॥

(b) कार्यनियतपूर्ववृत्ति कारणम् ॥

(c) कार्यं प्रागभावप्रतियोगि ॥

(d) कारणं त्रिविधम्, समवाय्यसमवायिनिमित्तभेदात् ॥

(e) यत्समवेतं कार्यमुत्पद्यते तत् समवायिकारणम्; यथा तन्तवः पटस्य, पटश्च स्वगतरूपादेः ॥

28. (a) *Sarvavyavahārahetuḥ jñānam bud-
 dhiḥ. Sā dvividhā, smṛtiḥ, anubhavaśca.*

(b) *Samśkāramātrajanyaṁ jñānaṁ smṛtiḥ.*

(c) *Tadbhinnaṁ jñānaṁ anubhavaḥ. Sa
 dvividhaḥ, yathārthaḥ, ayathārthaśca.*

(d) *Tadvati tatprakāraḥ anubhavaḥ
 yathārthaḥ. Saiva pramā ityucyate.*

(e) *Tadabhāvavati tatprakāraḥ anubhavaḥ
 ayathārthaḥ.*

(f) *Yathārthānubhavaḥ caturvidhaḥ, prat-
 yakṣa-anumiti-upamiti-śābdabhedāt.*

(g) *Tatkaraṇamāpi caturvidham, pratyakṣa-
 anumāna-upamāna-śābdabhedāt.*

29. (a) *Asādhāraṇam kāraṇam karaṇam.*

(b) *Kāryaniyatapūrvavṛtti kāraṇam.*

(c) *Kāryam prāgabdhāvapratiyogi.*

(d) *Kāraṇam trividham, samavāyi-asamavāyi-
 nimittabhedāt.*

(e) *Yatsamavetam kāryam utpadyate tat
 samavāyi-kāraṇam; yathā tantavaḥ paṭasya;
 paṭaśca svagatarūpādeḥ.*

A PRIMER OF INDIAN LOGIC

(f) कार्येण कारणेन वा सह एकस्मिन् अर्थे
 समवेतं सत् कारणमसमवायिकारणम् ; यथा तन्तुसंयोगः
 पटस्य, तन्तुरूपं पटरूपस्य ॥

(g) तदुभयभिन्नं कारणं निमित्तकारणम् ; यथा
 तुरीवेमादिकं पटस्य ॥

(h) तदेतत्त्रिविधकारणमध्ये यदसाधारणं
 कारणं तदेव कारणम् ॥

30. (a) तत्र प्रत्यक्षज्ञानकरणं प्रत्यक्षम् ॥

(b) इन्द्रियार्थसन्निकर्षजन्यं ज्ञानं प्रत्यक्षम् ।
 तत् द्विविधम्, निर्विकल्पकं सविकल्पकं चेति ॥

(c) तत् निष्प्रकारकं ज्ञानं निर्विकल्पकम् ।

(d) सप्रकारकं ज्ञानं सविकल्पकम् । यथा
 'दित्यः अयम्' 'ब्राह्मणः अयम्' 'श्यामः अयम्' 'पाचकः
 अयम्' इति ॥

(e) प्रत्यक्षज्ञानहेतुः इन्द्रियार्थसन्निकर्षः षड्विधः
 —संयोगः, संयुक्तसमवायः, संयुक्तसमवेतसमवायः, सम-
 वायः, समवेतसमवायः, विशेषणविशेष्यभावश्च इति ।

(f) *Kāryeṇa kāraṇena vā saha ekasmin arthe samavetam sat kāraṇam asamavāyikāraṇam; yathā tantusaṁyogaḥ paṭasya, tanturūpam paṭarūpasya.*

(g) *Tadubhayabhinnam kāraṇam nimitta-kāraṇam; yathā turivemādikam paṭasya.*

(h) *Tadetattrividhakāraṇam adhye yadasā-dhāraṇam kāraṇam tadeva karaṇam.*

30. (a) *Tatra pratyakṣajñānakaraṇam pratyakṣam.*

(b) *Indriyārthasannikarṣajanyam jñānam pratyakṣam. Tat dvividham, nirvikalpam savikalpam ceti.*

(c) *Tatra niṣprakārakam jñānam nirvikalpam.*

(d) *Sapprakārakam jñānam savikalpam. Yathā 'Dīttah ayam' 'Brāhmaṇah ayam' 'śyāmah ayam' 'Pācakah ayam' iti.*

(e) *Pratyakṣajñānāhetuḥ indriyārthasannikarṣaḥ ṣaḍvidhaḥ—saṁyogaḥ, saṁyuktasamavāyaḥ, saṁyuktasamavetasamavāyaḥ, samavāyaḥ, samavetasamavāyaḥ, viśeṣaṇaviśeṣyabhāvaśca iti.*

चक्षुषा घटप्रत्यक्षजनने संयोगः सन्निकर्षः ।
 घटरूपप्रत्यक्षजनने संयुक्तसमवायः सन्निकर्षः, संयुक्ते घटे
 रूपस्य समवायात् ।

रूपत्वसामान्यप्रत्यक्षे संयुक्तसमवेतसमवायः
 सन्निकर्षः, चक्षुस्संयुक्ते घटे रूपं समवेतम्, तत्र रूपत्वस्य
 समवायात् ।

श्रोत्रेण शब्दसाक्षात्कारे समवायः सन्निकर्षः,
 कर्णविवरवर्त्याकाशस्य श्रोतृत्वात्, शब्दस्य आकाशगुण-
 त्वात्, गुणगुणिनोश्च समवायात् । शब्दत्वसाक्षात्कारे सम-
 वेतसमवायः सन्निकर्षः, श्रोत्रसमवेते शब्दे शब्दत्वस्य
 समवायात् ॥

अभावप्रत्यक्षे विशेषणविशेष्यभावः सन्निकर्षः—
 'घटाभाववत् भूतलम्' इत्यत्र चक्षुःसंयुक्ते भूतले घटाभावस्य
 विशेषणत्वात् ॥

एवं सन्निकर्षषट्कजन्यं ज्ञानं प्रत्यक्षम्, तत्करण-
 मिन्द्रियम् । तस्मादिन्द्रियं प्रत्यक्षप्रमाणम् इति सिद्धम् ॥

इति प्रत्यक्षपरिच्छेदः

Cakṣuṣā ghaṭapratyakṣajanane saṁyogaḥ sannikarṣaḥ. Ghaṭarūpapratyakṣajanane saṁyuktasamavāyaḥ sannikarṣaḥ, saṁyukte ghaṭe rūpasya samavāyāt.

Rūpatvasūmānyapratyakṣe saṁyuktasamavetasamavāyaḥ sannikarṣaḥ, cakṣussaṁyukte ghaṭe rūpaṁ samavetaṁ, tatra rūpatvasya samavāyāt.

Śrotreṇa śabdāsākṣātkāre samavāyaḥ sannikarṣaḥ, kārṇavivaravartyākāśasya śrotrativāt, śabdasya ākāśaguṇativāt, guṇaguṇinośca samavāyāt. Śabdatvasākṣātkāre samavetasamavāyaḥ sannikarṣaḥ, śrotrasamavete śabde śabdatvasya samavāyāt.

Abhāvapratyakṣe viśeṣaṇaviśeṣyabhāvaḥ sannikarṣaḥ — 'ghaṭābhāvavāt bhūtaṁ' ityatra cakṣussaṁyukte bhūtale ghaṭābhāvasya viśeṣaṇativāt.

Evam sannikarṣaṣaṭkajanyam jñānaṁ pratyakṣam, tatkarāṇamindriyam. Tasmā dindriyam pratyakṣapramāṇam iti siddham.

Iti pratyakṣaparicchedaḥ.

—:o:—

अनुमानपरिच्छेदः

31. (a) अनुमितिकरणमनुमानम् ॥

(b) परामर्शजन्यं ज्ञानमनुमितिः ॥

(c) व्याप्तिविशिष्टपक्षधर्मताज्ञानं परामर्शः ।
 यथा 'वह्निव्याप्यधूमवान् अयं पर्वतः' इति ज्ञानं परामर्शः ।
 तज्जन्यं 'पर्वतो वह्निमान्' इति ज्ञानमनुमितिः ॥

(d) 'यत्र यत्र धूमः तत्राग्निः' इति साहचर्य-
 नियमो व्याप्तिः ॥

(e) व्याप्यस्य पर्वतादिवृत्तित्वं पक्षधर्मता ॥

32. (a) अनुमानं द्विविधम्, स्वार्थं परार्थं च ॥

(b) स्वार्थं स्वानुमितिहेतुः । तथा हि—स्वयमेव
 भूयोदर्शनेन 'यत्र यत्र धूमः तत्र अग्निः' इति महान-
 सादौ व्याप्तिं गृहीत्वा पर्वतसमीपं गतः, तदते च अग्नौ
 संदिहानः पर्वते धूमं पश्यन् व्याप्तिं स्मरति—'यत्र यत्र धूमः
 तत्र अग्निः' इति । तदनन्तरं 'वह्निव्याप्यधूमवान् अयं पर्वतः'
 इति ज्ञानमुत्पद्यते । अयमेव लिङ्गपरामर्श इत्युच्यते ।

ANUMĀNA PARICCHEDAḤ

19

ANUMĀNA-PARICCHEDAḤ.

31. (a) *Anumitikaraṇam anumānam.*

(b) *Parāmarśajanyam jñānam anumitiḥ.*

(c) *Vyāptiviśiṣṭapakṣadharmatājñānam parāmarśaḥ. Yathā 'Vahnivyāpyadhūmavān ayam parvataḥ' iti jñānam parāmarśaḥ. Tajjanyam 'parvato vahnimān' iti jñānam anumitiḥ.*

(d) *'Yatra yatra dhūmaḥ tatrāgniḥ' iti sāha-caryaniyamo vyāptiḥ.*

(e) *Vyāpyasya parvatādivṛttitvam pakṣadhar-matā.*

32. (a) *Anumānam dvividham, svārtham parārtham ca.*

(b) *Svārtham svānumitihetuḥ. Tathā hi—svayameva bhūyodarśanena 'yatra yatra dhūmaḥ tatra agniḥ' iti mahānasādan vyāptim grhītvā parvatāsamīpam gataḥ, tadgate ca agnau sandihānaḥ parvate dhūmam paśyan vyāptim smarati—'yatra yatra dhūmaḥ tatra agniḥ' iti. Tadanantaram 'vahnivyāpyadhūmavān ayam parvataḥ' iti jñānam utpadyate. Ayameva līṅga-parāmarśa.*

तस्मात् 'पर्वतो वह्निमान्' इति ज्ञानमनुमितिः उत्पद्यते ।
तदेतत् स्वार्थानुमानम् ॥

(c) यत्तु स्वयं धूमात् अग्निम् अनुमाय परं
प्रति बोधयितुं पञ्चावयववाक्यं प्रयुज्यते तत् परार्थानुमा-
नम् । यथा—

पर्वतो वह्निमान् ।

धूमवत्त्वात् ।

यो यो धूमवान् स वह्निमान् यथा

महानसः ।

तथा च अयम् ।

तस्मात् तथा—इति ॥

अनेन प्रतिपादितात् लिङ्गात् परोऽपि अग्निं
प्रतिपद्यते ।

33. (a) प्रतिज्ञाहेतूदाहरणोपनयनिगमनानि पञ्चा-
वयवाः ।

'पर्वतो वह्निमान्' इति प्रतिज्ञा ।

'धूमवत्त्वात्' इति हेतुः ।

'यो यो धूमवान् स वह्निमान्, यथा
महानसः' इति उदाहरणम् ।

ityucyate. Tasmāt 'parvato vahnimān' iti jñānam
 anumitih utpadyate. Tadetat svārthānumānam.

(c) Yattu svayam dhūmāt agnim anumāya
 param prati bodhayitum pañcāvayavākyaṃ
 prayujyate tat parārthānumānam. Yathā—

Parvato vahnimān.

Dhūmavattvāt.

Yo yo dhūmavān sa vahnimān yathā mahā-
 nasah.

Tathā ca ayam.

Tasmāt tathā—iti.

Anena pratipāditāt līngāt paro'pi agnim prati-
 padyate.

33. (a) Pratijñā-hetu--udāharaṇa--upanaya-
 nigamanāni pañcāvayavāḥ.

'Parvato vahnimān' iti pratijñā.

'Dhūmavattvāt' iti hetuḥ.

'Yo yo dhūmavān sa vahnimān, yathā mahā-
 nasah' iti udāharaṇam.

‘तथा च अयम्’ इति उपनयः ।

‘तस्मात् तथा’ इति निगमनम् ।

(b) स्वार्थानुमितिपरार्थानुमित्योः लिङ्गपरामर्श एव करणम् । तस्मात् लिङ्गपरामर्शः अनुमानम् ॥

34. (a) लिङ्गं त्रिविधम्, अन्वयव्यतिरेकि, केवलान्वयि, केवलव्यतिरेकि च इति ।

(b) अन्वयेन व्यतिरेकेण च व्याप्तिम् अन्वयव्यतिरेकि, यथा—वह्नौ साध्ये धूमवत्त्वम् । ‘यत्तु धूमः तत्र अग्निः यथा महानसे’ इति अन्वयव्याप्तिः । ‘यत्र वह्निः नास्ति तत्र धूमोऽपि नास्ति यथा हृदे’ इति व्यतिरेकव्याप्तिः ॥

(c) अन्वयमात्रव्याप्तिकं केवलान्वयि ; यथा—‘घटः अभिधेयः प्रमेयत्वात्, पटवत्’ । अत्र प्रमेयत्वाभिधेयत्वयोः व्यतिरेकव्याप्तिः नास्ति, सर्वस्यापि प्रमेयत्वात् अभिधेयत्वाच्च ॥

(d) व्यतिरेकमात्रव्याप्तिकं केवलव्यतिरेकि ; यथा—पृथिवी इतरेभ्यो मिद्यते गन्धवत्त्वात् ; यत् इतरेभ्यो न मिद्यते न तत् गन्धवत्, यथा जलम् ; न च इयं तथा ; तस्मात् न तथा—इति । अत्र ‘यत् गन्धवत् तत् इतरभिन्नम्’ इत्यन्वयदृष्टान्तो नास्ति, पृथिवीभात्रस्य पक्षत्वात् ॥

'Tathā ca ayam' iti upanayaḥ.

'Tasmāt tathā' iti nigamanam.

(b) Svārthānumiti-parārthānumityoḥ liṅga-parāmarśa eva karaṇam. Tasmāt liṅgaparāmarśaḥ anumānam.

34. (a) Liṅgam trividham, anvayavyatireki, kevalānvayi, kevalavyatireki ca iti.

(b) Anvayena vyatirekeṇa ca vyāptimat anvayavyatireki, yathā—vahnau sādhye dhūmavattvam. 'Yatra dhūmaḥ tatra agniḥ yathā mahānase' iti anvayavyāptiḥ. 'Yatra vahnīḥ nāsti tatra dhūmo'pi nāsti yathā hrade' iti vyatirekavyāptiḥ.

(c) Anvayamātravyāptikam kevalānvayi, yathā—'ghaṭaḥ abhidheyaḥ prameyatvāt, paṭavat.' Atra prameyatva-abhidheyatvayoḥ vyatirekavyāptiḥ nāsti, sarvasyāpi prameyatvāt abhidheyatvācca.

(d) Vyatirekamātravyāptikam kevalavyatireki; yathā—pṛthivī itarebhyo bhidyate, gandhavattvāt; yat itarebhyo na bhidyate na tat gandhavat, yathā jalam; na ca iyam tathā; tasmāt na tathā iti. Atra 'yat gandhavat tat itarabhinnam' ityanvaya-dṛṣṭāntaḥ nāsti, pṛthivīmātrasya pakṣatvāt.

A PRIMER OF INDIAN LOGIC

35. (a) सन्दिग्धसाध्यवान् पक्षः, यथा धूमवत्त्वे हेतौ पर्वतः ॥

(b) निश्चितसाध्यवान् सपक्षः, यथा तत्रैव महानसः ॥

(c) निश्चितसाध्याभाववान् विपक्षः, यथा तत्रैव हृदः ॥

36. (a) सव्यभिचारविरुद्धसत्प्रतिपक्षासिद्धबाधिताः पञ्च हेत्वाभासाः ॥

(b) सव्यभिचारः अनैकान्तिकः । स त्रिविधः—साधारणासाधारणानुपसंहारिभेदात् । तत्र साध्याभाव-वद्वृत्तिः साधारणः अनैकान्तिकः, यथा 'पर्वतो वह्निमान् प्रमेयत्वात्' इति ; प्रमेयत्वस्य वह्न्यभाववति हृदे विद्यमानत्वात् ॥

सर्वसपक्षविपक्षव्यावृत्तः पक्षमात्रवृत्तिः असाधारणः ; यथा 'शब्दो नित्यः शब्दत्वात्' इति । शब्दत्वं सर्वेभ्यः नित्येभ्यः अनित्येभ्यश्च व्यावृत्तं शब्दमात्रवृत्तिः ॥

अन्वयव्यतिरेकदृष्टान्तरहितः अनुपसंहारी ; यथा 'सर्वमनित्यं प्रमेयत्वात्' इति । अत्र सर्वस्यापि पक्षत्वात् दृष्टान्तो नास्ति ॥



35. (a) *Sandigdhasādhyavān pakṣaḥ, yathā dhūmavattve hetau parvataḥ.*

(b) *Niścitasādhyavān śapakṣaḥ, yathā tattraiva mahānasah.*

(c) *Niścitasādhyābhāvavān vipakṣaḥ, yathā tattraiva hradah.*

36. (a) *Savyabhicāra-viruddha-satpratipakṣa-asiddha-bādhitāḥ pañca hetvābhāsāḥ.*

(b) *Savyabhicāraḥ anaikāntikaḥ. Sa trividhaḥ —sādhāraṇa-asādhāraṇa-anuṣaṁhāribhedāt. Tatra sādhyābhāvavadvṛttiḥ sādharmaṇaḥ anaikāntikaḥ, yathā 'parvato vahnimān, prameyatvāt' iti; prameyatvasya vahnyabhāvarati hrade vidyamānatvāt.*

Sarvasapakṣavipakṣavyāvṛttaḥ pakṣamātravṛttiḥ asādhāraṇaḥ; yathā 'śabdo nityaḥ, śabdatvāt' iti. Śabdatvam sarvebhyaḥ nityebhyaḥ anityebhyaśca vyāvṛttam śabdāmātravṛtti.

Ānvayavyatirekadr̥ṣṭāntarahitaḥ anuṣaṁhārī; yathā 'sarvam anityam, prameyatvāt' iti. Atra sarvasyāpi pakṣatvāt dr̥ṣṭānto nāsti.

A PRIMER OF INDIAN LOGIC

(c) साध्याभावव्याप्तो हेतुः विरुद्धः ; यथा
 'शब्दः नित्यः कृतकत्वात्' इति । कृतकत्वं हि नित्यत्वा-
 भावेन अनित्यत्वेन व्याप्तम् ॥

(d) साध्याभावसाधकं हेत्वन्तरं यस्य स सत्प्र-
 तिपक्षः ; यथा 'शब्दो नित्यः श्रावणत्वात् शब्दत्ववत्',
 'शब्दः अनित्यः कार्यत्वात् घटवत्' ॥

(e) असिद्धः त्रिविधः—आश्रयासिद्धः, स्वरूपा-
 सिद्धः, व्याप्यत्वासिद्धश्च इति ॥

आश्रयासिद्धः यथा 'गगनारविन्दं सुरभि, अर-
 विन्दत्वात्, सरोजारविन्दवत्' । अत्र गगनारविन्दमाश्रयः,
 स च नास्त्येव ॥

स्वरूपासिद्धो यथा 'शब्दो गुणः चाक्षुषत्वात्,
 रूपवत्' । अत्र चाक्षुषत्वं शब्दे नास्ति, शब्दस्य श्राव-
 णत्वात् ॥

सोपाधिको हेतुः व्याप्यत्वासिद्धः । साध्य-
 व्यापकत्वे सति साधनाव्यापकत्वमुपाधिः । साध्यसमाना-
 धिकरणात्यन्ताभावाप्रतियोगित्वं साध्यव्यापकत्वम् । साधन-
 वन्निष्ठात्यन्ताभावप्रतियोगित्वं साधनाव्यापकत्वम् । 'पर्वतो
 धूमवान्, वह्निमत्त्वात्' इत्यत्र आर्द्रेन्धनसंयोगः उपाधिः ।
 'यत्र धूमः तत्र आर्द्रेन्धनसंयोगः' इति साध्यव्यापकता ।

(c) Sādhyābhāvavyāpto hetuḥ viruddhaḥ ;
 yathā 'śabdaḥ nityaḥ kṛtakatvāt' iti. Kṛtakatvam
 hi nityatvābhāvena anityatvena vyāptam.

(d) Sādhyābhāvasādhakam hetvantaram
 yasya sa satpratipakṣaḥ; yathā 'śabdo nityaḥ,
 śrāvaṇatvāt śabdatvavat,' 'śabdaḥ anityaḥ, kārya-
 tvāt ghaṭavat.'

(e) Asiddhaḥ trividhaḥ—āśrayāsiddhaḥ, sva-
 rūpāsiddhaḥ vyūpyatvūsiddhaśca iti.

Āśrayāsiddhaḥ yathā 'gaganāravindam sura-
 bhi, aravindatvāt, sarojāravindavat'. Atra gaganā-
 ravindam āśrayaḥ, sa ca nāstyeva.

Svarūpāsiddho yathā 'śabdo guṇaḥ cākṣu-
 ṣatvāt, rūpavat.' Atra cākṣuṣatvam śabde nāsti, śab-
 dasya śrāvaṇatvāt.

Sopādhiko hetuḥ vyūpyatvūsiddhaḥ. Sādhyā-
 vyūpakatve sati sādhanāvyūpakatvam upādhiḥ. Sād-
 hyasamānādhikaraṇa - atyantābhāva-apratiyogitvam
 sādhyavyūpakatvam. Sādhanavanniṣṭha-atyantā-
 bhāva-pratiryogitvam sādhanāvyūpakatvam. 'Parvato
 dhūmavān, vahnimattvāt' ityatra ārdrendhanasam-
 yogaḥ upādhiḥ. 'Yatra dhūmaḥ tatra ārdrendhana-

A PRIMER OF INDIAN LOGIC

‘यत्र वह्निः तत्र आर्द्रेन्धनसंयोगो नास्ति, अयोगोलके आर्द्रेन्धनसंयोगाभावात्’ इति साधनाव्यापकता । एवं साध्यव्यापकत्वे सति साधनाव्यापकत्वात् आर्द्रेन्धनसंयोगः उपाधिः । सोपाधिकत्वात् वह्निमत्त्वं व्याप्यत्वासिद्धम् ॥

(f) यस्य साध्याभावः प्रमाणान्तरेण निश्चितः स बाधितः—यथा ‘वह्निः अनुष्णः द्रव्यत्वात्’ इति । अत्र अनुष्णत्वं साध्यं, तदभावः उष्णत्वं स्पर्शनप्रत्यक्षेण गृह्यते इति बाधितत्वम् ॥

इति अनुमानपरिच्छेदः ।

उपमानपरिच्छेदः

37. उपमितिकरणं उपमानम् । संज्ञासंज्ञिसंबन्ध-ज्ञानमुपमितिः, तत्करणं सादृश्यज्ञानम् । तथा हि—कश्चित् गवयपदार्थमजानन् कुतश्चित् आरण्यकपुरुषात् ‘गोसदृशः गवयः’ इति श्रुत्वा वनं गतः वाक्यार्थं स्मरन् गोसदृशं पिण्डं पश्यति । तदनन्तरम् ‘असौ गवयपदवाच्यः’ इत्युपमितिः उत्पद्यते ॥

इति उपमानपरिच्छेदः ।

UPAMĀNA-PARICCHEDAḤ

saṁyogaḥ' iti sādhyavyāpakatā. Yatra vahniḥ tatra ārdrendhanasaṁyogo nāsti, ayogolake ārdrendhanasaṁyogūbhāvāt' iti sādhanāvyāpakatā. Evam sādhyavyāpakatve sāti sādhanāvyāpakatvāt ārdrendhanasaṁyogaḥ upādhiḥ. Sopādhikatvāt vahnimattvam vyāpyatvāsiddham.

(f) *Yasya sādhyābhāvaḥ pramāṇāntareṇa niścitaḥ sa bādhitaḥ—yathā 'vahniḥ anuṣṇaḥ, dravyatvāt' iti. Atra anuṣṇatvam sādhyam, tadbhāvaḥ uṣṇatvam spūrśanapratyakṣeṇa grhyate iti bādhitatvam.*

Iti anumānaparicchedaḥ.

UPAMĀNA-PARICCHEDAḤ.

37. *Upamitikaraṇam upamānam. Saṁjñā-saṁjñīsambandhajñānam upamitiḥ, tatkarāṇam sādṛśyajñānam. Tathā hi—kaścit gavayapadārthamajūnan kutaścit āraṇyakapuruṣāt 'gosadrśaḥ gavayaḥ' iti śruvā vanam gātaḥ vūkyārtham smaran gosadrśam piṇḍam paśyati. Tadanantaram 'asau gavayapadavācyah' ityupamitiḥ utpadyate.*

Iti upamānaparicchedaḥ.

A PRIMER OF INDIAN LOGIC

शब्दपरिच्छेदः

38. (a) आप्तवाक्यं शब्दः । आप्तस्तु यथार्थवक्ता ।
वाक्यं पदसमूहः—यथा 'गामानय' इति ॥

(b) शक्तं पदम् । 'अस्मात् पदात् अयमर्थः
बोद्धव्यः' इति ईश्वरसंकेतः शक्तिः ॥

39. (a) आकाङ्क्षा योग्यता सन्निधिश्च वाक्यार्थ-
ज्ञाने हेतुः ॥

(b) पदस्य पदान्तरव्यतिरेकप्रयुक्तान्वयाननु-
भावकत्वमाकाङ्क्षा ॥

(c) अर्थाबाधो योग्यता ।

(d) पदानाम् अविलम्बेन उच्चारणं संनिधिः ॥

(e) तथा च आकाङ्क्षादिरहितं वाक्यम् अप्रमा-
णम् । यथा 'गौः अश्वः पुरुषः हस्ती' इति न प्रमाणम् ,
आकाङ्क्षाविरहात् । 'वह्निना सिञ्चेत्' इति न प्रमाणं,
योग्यताविरहात् । प्रहरे प्रहरे असहोच्चारितानि 'गाम् आनय'
इत्यादिपदानि न प्रमाणं, संनिध्यभावात् ॥

40. (a) वाक्यं द्विविधम्, वैदिकं लौकिकं च ।
वैदिकम् ईश्वरोक्तत्वात् सर्वमेव प्रमाणम् । लौकिकं तु आप्तोक्तं
प्रमाणम्, अन्यदप्रमाणम् ॥

ŚABDA-PARICCHEDAḤ

ŚABDA-PARICCHEDAḤ.

38. (a) *Āptavākyaṃ śabdaḥ. Āptastu yathārthavaktā. Vākyaṃ padasamūhaḥ.—yathā 'gām ānaya' iti.*

(b) *Śaktam padam. 'Asmāt padāt ayam arthaḥ boddhavyaḥ' iti īśvarasaṁketah śaktiḥ.*

39. (a) *Ākāṅkṣā, yogyatā, sannidhiśca vākyaarthajñāne hetuḥ.*

(b) *Padasya padāntaravyatirekapravyukta-anvaya-ananubhāvakatvam ākāṅkṣā.*

(c) *Arthābādho yogyatā.*

(d) *Padānām avilambena uccāraṇam sannidhiḥ.*

(e) *Tathā ca ākāṅkṣādirahitam vākyaṃ apramāṇam. Yathā 'gauḥ aśvaḥ puruṣaḥ hastī' iti na pramāṇam, ākāṅkṣāvirahāt. 'Vahninā siñcel' iti na pramāṇam, yogyatāvirahāt. Prahare prahare asahoccāritāni 'gām ānaya' ityādi padāni na pramāṇam, sannidhyabhāvāt.*

40. (a) *Vākyaṃ dvividham, vaidikam laukikam ca. Vaidikam īśvaroktatvāt sarvameva pramāṇam. Laukikam tu āptoktam pramāṇam, anyadapramāṇam.*

A PRIMER OF INDIAN LOGIC

(b) वाक्यार्थज्ञानं शब्दज्ञानम् । तत्करणं
 शब्दः ॥

इति शब्दपरिच्छेदः ।

एवं यथार्थानुभवो निरूपितः ॥

41. (a) अयथार्थानुभवः त्रिविधः, संशयविपर्यय-
 तर्कभेदात् ॥

(b) एकस्मिन् धर्मिणि विरुद्धनानाधर्मवैशि-
 ष्ट्यावगाहि ज्ञानं संशयः—यथा स्थाणुर्वा पुरुषो वा इति ॥

(c) मिथ्याज्ञानं विपर्ययः—यथा शुक्तौ 'इदं
 रजतम्' इति ॥

(d) व्याप्यारोपेण व्यापकारोपः तर्कः—यथा
 'यदि वह्निः न स्यात् तर्हि धूमोऽपि न स्यात्' इति ॥

42. स्मृतिरपि द्विविधा, यथार्था अयथार्था च ।
 प्रमाजन्त्या यथार्था । अप्रमाजन्त्या अयथार्था ॥

43. (a) सर्वेषाम् अनुकूलतया वेदनीयं सुखम् ॥

(b) प्रतिकूलतया वेदनीयं दुःखम् ॥

(c) इच्छा कामः ॥

(d) क्रोधो द्वेषः ॥

ŚABDA-PARICCHEDAḤ

33

(b) *Vākyaṛthajñānam śabdajñānam. Tatka-
raṇam śabdaḥ.*

Iti śabdaparicchedaḥ.

Evam Yathārthānubhavo Nirūpitaḥ.

41. (a) *Ayathārthānubhavaḥ trividhaḥ, saṁ-
śaya-viparyaya-tarkabhedāt.*

(b) *Ekasmin dharmiṇi viruddhanānā-
dharmavaiśiṣṭyāvagāhijñānam saṁśayaḥ—yathā
sthānurvā puruṣo vā iti.*

(c) *Mithyājñānam viparyayaḥ—yathā śuk-
tau 'idam rajatam', iti.*

(d) *Vyāpyāropeṇa vyāpakāropaḥ tarkaḥ.—
yathā 'yadi vahniḥ na syāt tarhi dhūmo'pi na syāt'
iti.*

42. *Smṛtirāpi dvividhā, yathārthā ayathārthā
ca. Pramājanyā yathārthā. Apramājanyā aya-
thārthā.*

43. (a) *Sarveṣām anukūlatayā vedanīyam
sukham.*

(b) *Pratikūlatayā vedanīyam duḥkham.*

(c) *Ichā kāmāḥ.*

(d) *Krodho dveṣaḥ.*

A PRIMER OF INDIAN LOGIC

- (e) कृतिः प्रयत्नः ॥
 (f) विहितकर्मजन्यः धर्मः ॥
 (g) निषिद्धकर्मजन्यस्तु अधर्मः ।
 (h) बुद्ध्यादयः अष्टौ आत्ममात्रविशेषगुणाः ।
 बुद्धीच्छाप्रयत्नाः नित्याः अनित्याश्च । नित्याः ईश्वरस्य ।
 अनित्याः जीवस्य ।

(i) संस्कारः त्रिविधः—वेगः, भावना, स्थित-
 स्थापकश्च इति ॥

वेगः पृथिव्यादिचतुष्टयमनोवृत्तिः ।

अनुभवजन्या स्मृतिहेतुः भावना आत्म-
 मात्रवृत्तिः ।

अन्यथाकृतस्य पुनः तादवस्थ्यापादकः स्थित-
 स्थापकः कटादिपृथिवीमात्रवृत्तिः ॥

इति गुणाः

44. चलनात्मकं कर्म । ऊर्ध्वदेशसंयोगहेतुः उत्क्षे-
 पणम् । अधोदेशसंयोगहेतुः अवक्षेपणम् । शरीरस्य सन्नि-
 कृष्टसंयोगहेतुः आकुञ्चनम् । विप्रकृष्टसंयोगहेतुः प्रसार-
 णम् । अन्यत्सर्वं गमनम् ॥

45. नित्यमेकमनेकानुगतं सामान्यम् । द्रव्य-
 गुणकर्मवृत्तिः । परं सत्ता । अपरं द्रव्यत्वादि ॥

(e) *Kṛtīh prayatnaḥ.*

(f) *Vihitakarmajanyaḥ dharmah.*

(g) *Niṣiddhakarmajanyaस्तु adharmah.*

(h) *Buddhyādayaḥ aṣṭau ātmamātravi eṣa-
 guṇāḥ. Buddhi-icchā-prayatnāḥ nityāḥ anityāśca,
 Nityāḥ īśvarasya. Anityāḥ Jīvasya.*

(i) *Saṃskāraḥ trividhaḥ—vegah, bhāvanā,
 sthitasthāpakaśca iti.*

Vegah pṛthivyādicatuṣṭayamanovṛttiḥ.

*Anubhavajanyā smṛtihetuḥ bhāvanā ātma-
 mātravṛttiḥ.*

*Anyathākṛtasya punaḥ tādavasthyāpādakah
 sthitasthāpakah kaṭādiḥpṛthivīmātravṛttiḥ.*

Iti guṇāḥ.

44. *Calanātmakam karma. Ūrdhvadeśa-
 saṃyogahetuḥ utkṣepaṇam. Adhodeśasaṃyogahetuḥ
 avakṣepaṇam. Śarīrasya sannikṛṣṭasaṃyogahetuḥ
 ākuñcanam. Viprakṛṣṭasaṃyogahetuḥ prasāraṇam.
 Anyatsarvam gāmanam.*

45. *Nityam ekam anekānugalam sāmānyam.
 Dravya-guṇa-karmavṛtti. Param sattā. Aparam
 dravyatvādi.*

A PRIMER OF INDIAN LOGIC

46. नित्यद्रव्यवृत्तयः व्यावर्तकाः विशेषाः ॥

47. नित्यसंबन्धः समवायः, अयुतसिद्धवृत्तिः ।
 ययोः द्वयोः मध्ये एकमविनश्यदवस्थम् अपराश्रितमेवाव-
 तिष्ठते तौ अयुतसिद्धौ—यथा अवयवावयविनौ, गुण-
 गुणिनौ, क्रियाक्रियावन्तौ, जातिव्यक्ती, विशेषनित्यद्रव्ये
 च इति ॥

48. (a) अनादिः सान्तः प्रागभावः, उत्पत्तेः पूर्वं
 कार्यस्य ॥

(b) सादिः अनन्तः प्रध्वंसः, उत्पत्त्यनन्तरं
 कार्यस्य ॥

(c) त्रैकालिकसंसर्गावच्छिन्नप्रतियोगिताकः
 अत्यन्ताभावः—यथा 'भूतले घटः नास्ति' इति ॥

(d) तादात्म्यसंबन्धावाच्छिन्नप्रतियोगिताकः
 अन्योन्याभावः—यथा 'घटः पटो न' इति ॥

49. सर्वेषां पदार्थानां यथायथम् उक्तेष्वन्तर्भावात्
 सप्तैव पदार्थाः इति सिद्धम् ॥

50. कणादन्यायमतयोः बालव्युत्पत्तिसिद्धये ।
 अन्नमहेन विदुषा रचितस्तर्कसंग्रहः ॥

इति तर्कसंग्रहः समाप्तः ॥



46. *Nityadravyavṛttayaḥ vyāvartakāḥ viśeṣāḥ,*

47. *Nityasambandhaḥ samavāyaḥ, ayutasiddhavarṛtiḥ. Yayoh dvayoh madhye ekamavinaśyadavastham, aparāśritamevāvatiṣṭhate tau ayutasiddhau—yathā avayavāvayavinau, guṇaguṇinau, kriyākriyāvantau, jātivyakti, viśeṣanityadravye ca iti.*

48. (a) *Anādiḥ sāntaḥ prāgabhāvaḥ, utpatteḥ pūrvam kāryasya.*

(b) *Sādiḥ anantaḥ pradhvaṁsaḥ, utpattyanantaram kāryasya.*

(c) *Traikālikasaṁsargūvacchinnaḥ pratiyogitākaḥ atyantābhāvaḥ—yathā 'bhūtaḥ ghaṭaḥ nāsti' iti,*

(d) *Tādātmyasambandhūvacchinnaḥ pratiyogitākaḥ atyantābhāvaḥ—yathā 'ghaṭaḥ paṭo na' iti.*

49. *Sarveṣāṁ padārthānāṁ yathāyatham ukteṣvantarbhāvāt saptaiva padārthāḥ iti siddham.*

50. *Kaṇādanyāyamatayoḥ bālavrutipattisiddhaye.*

Annambhaṭṭena viduṣā racitastarkasaṁgrahaḥ.

ITI TARKASAMGRAHAḤ SAMĀPTAḤ



CSL

॥ श्रीः ॥

॥ तर्कसंग्रहः ॥

A PRIMER OF INDIAN LOGIC

PART III.

TRANSLATION AND EXPOSITION



39

CSL

CHAPTER I. PERCEPTION.

1

T—In my heart, I devoutly cherish the Lord of the universe ; my teacher, I respectfully greet ; and I proceed to write this primer of Indian logic, called *Tarka-saṁgraha*, with a view to beginners gaining knowledge easily.

Following the time-honoured practice of orthodox Sanskrit writers, Annambhaṭṭa begins his primer with an appropriate *maṅgala*, which consists, here, in paying devout homage to his God and to his teacher. The expression *Viśveśa*—the Lord of the universe—is suggestive of the central argument of the Nyāya theism—the creationistic argument. The four preambulatory factors, constituting what is known as *anubandha-caluṣṭaya*, are also indicated in the second line of the introductory verse. They are subject-matter (*viśaya*), the chief aim (*prayojana*),

A PRIMER OF INDIAN LOGIC [PART III]

relation (*sambandha*) and the persons for whom the work is specially designed (*adhikārin*). Such preambulatory details are usually incorporated in modern books in a separate preface prefixed to the work in question, while they are briefly set forth in the opening verses in śāstra treatises in Sanskrit. The elements of the Nyāya-Vaiśeṣika system in its syncretist form constitute the subject-matter of this Primer and its aim is to enable beginners to easily understand them. It follows from this that this Primer is intended for the beginners. *Pratipādyā-pratipādaka-bhūva*—the relation of *treated and treatise*—is generally stated to form the *sambandha* in almost all śāstra works. This would be useless information, when understood literally. It would acquire special significance if it should be interpreted as holding out an assurance, that the author can be trusted to treat well in his treatise, the subject in hand.

The name *Tarka-saṃgraha* is interpreted by Annambhaṭṭa himself as a 'compendious elucidation of the nature of substance, qualities and such other ontological categories of the Vaiśeṣika-system, that are accepted by Nyāya. The term *tarka* is thus taken by the author in a somewhat unusual sense. The usual

meanings, however, of the word *tarka* are logic, reasoning, *reductio ad absurdum* and discussion. Putting all these ideas together, it would be easy to see how the title *Tarka-saṃgraha* may be taken to be equivalent to 'A Primer of the Nyāya-Vaiśeṣika system in its syncretist form'.

2

T—Substance, quality, activity, generality, particularity, inherence and non-existence are the seven categories (*padārthāḥ*).

A *padārtha* is literally a nameable or denotable thing or a thing which corresponds to a word. Kaṇāda, in his Vaiśeṣika-sūtras, gives the name *artha* to substance (*dravya*), quality (*guṇa*) and activity (*karma*). Praśastapāda, the author of the Vaiśeṣika-bhāṣya called *Padārtha-dharma-saṃgraha*, enumerates the first six *padārthas* out of the seven mentioned above. Later Vaiśeṣikas add non-existence (*abhāva*) to Praśastapāda's list of six *padārthas*. Gautama—the author of the Nyāya-sūtras, Vātsyāyana—the author of the Nyāya-bhāṣya and later Naiyāyikas recognise all these seven *padārthas*.



A PRIMER OF INDIAN LOGIC [PART III]

What is a *padārtha* or category as understood in the above text—2. T.? A *padārtha* is usually defined as a knowable thing (*jñeya*) or as a validly cognisable thing (*prameya*), or as a nameable or denotable thing (*abhidheya*). The Nyāya-Vaiśeṣika system maintains that its scheme of seven *padārthas* represents a satisfactory classification of all the knowable or nameable things. The first six are called *bhāva-padārthas* or existent entities and are thus contrasted, in a marked way, with *abhāva*, which amounts to non-existence. Though Kaṇāda speaks of *abhāva*, he does not include it in his list of *arthas* for the reason that he understands by *artha* an entity in which existence or *sattā*, in the Vaiśeṣika sense, inheres. Praśastapāda does not mention *abhāva* in his scheme of six *padārthas*, since this scheme confines itself to *bhāvas*. But a complete scheme of all the knowable or validly cognisable or nameable things must not omit *abhāva*; for it is maintained in the Nyāya-Vaiśeṣika system that we know *abhāva*, know it correctly and the negative terms in language denote it.

It would be useful to compare in this connection the above scheme of seven *padārthas* with Gautama's scheme of sixteen *padārthas* and with

the corresponding schemes adopted in certain other systems of Indian philosophy. In the first Sūtra of the Nyāya-darśana, Gautama enumerates sixteen *padārthas*—means of valid knowledge (*pramāṇa*), objects of valid knowledge (*prameya*), doubt (*saṁśaya*), purpose (*prayojana*), instances (*dṛṣṭānta*), established conclusions (*siddhānta*), members of syllogism (*avayava*), *reductio ad absurdum* (*tarka*), decisive knowledge (*nirṇaya*), arguing for truth (*vāda*), arguing constructively as well as destructively for victory (*jalpa*), merely destructive argument (*vitandā*), fallacious reasons (*hetvābhāsa*), quibbling (*chala*), specious and unavailing objections (*jāti*), and vulnerable points (*nigrahasthāna*). These sixteen are not metaphysical categories similar to those of the Vaiśeṣikas; but they are merely sixteen topics which one should study in order to master the details of the Nyāya dialectics. The Mīmāṃsakas of the Bhāṭṭa school recognise five *padārthas*—substance, generality, quality, activity and non-existence. The Prābhākaras recognise eight—the six *bhāvas* of the Nyāya-system and potency (*śakti*), similarity (*sādrśya*) and number (*saṅkhyā*), non-existence not being accepted as a distinct category. The Sāṅkhyas accept two ultimate *padārthas*:—primordial matter (*prakṛti*) and



A PRIMER OF INDIAN LOGIC [PART III]

spirit (*puruṣa*). Among the Vedāntins, the Advaitins maintain that there is one ultimate reality—Brahman and there are only two *padārthas*—spirit (*cit*) and non-spirit (*acit*), or soul (*ātman*) and non-soul (*anātman*); the Viśiṣṭādvaita school recognises three—spirit (*cit*), non-spirit (*acit*), and God (*Īśvara*); and the Dvaitins reduce all the *padārthas* to two main categories—Independent and Dependent. Among the older Vaiśeṣikas, we find some, like the author of the *Daśapadārtha-śāstra*, who would recognise ten *padārthas* in all—the six *bhāvas* of the later Vaiśeṣikas, potentiality (*śakti*), inability (*a-śakti*), generic differentia (*sāmānya-viśeṣa*) and non-existence (*abhāva*). Except Gautama's list of sixteen *padārthas*, all these schemes of categories attempt, with a large measure of success, at a sound metaphysical classification of all nameable or knowable things; and none of these Indian schemes can justly be said to exhibit the logical defects that we notice in similar schemes of categories known to Western logic such as the somewhat arbitrary scheme of ten categories or predicates given by Aristotle, and the schemes of four or three or seven categories put forward by the Stoics, Descartes, Spinoza, Locke, Mill and other philosophers.



CH. I] PERCEPTION

In most of the syncretist works dealing with the tenets of the Nyāya-Vaiśeṣika system, the arguments advanced by the Bhāṭṭas as well as the Prābhākaras to establish the existence of potentiality (*śakti*) as a distinct category and the view upheld by the latter school of Mīmāṃsakas that similarity (*sādrśya*) should be given a distinct place in the list of categories are refuted. Counter-agents (*pratibandhaka*) counteract the operation of causes and causes turn out to be unavailing. The counteraction that we experience in such cases cannot be explained otherwise than as consisting in the destruction of the causal efficacy or *śakti* of the causes. Thus, according to Mīmāṃsakas, the existence of *śakti* as a distinct category must necessarily be recognised. The Naiyāyikas argue that counteraction consists merely in the presence of counter-agents, the total non-existence of which is one of the elements constituting the full complement of the causal apparatus (*sāmagrī*). Thus they disprove the necessity for recognising *śakti* as a distinct category. Similarity, according to Prābhākaras, does not consist merely in the possession of parts or qualities or features of the same kind as the Naiyāyikas urge; but it is revealed in experience as a distinct category. The



Naiyāikas contend that a careful analysis of experience would show that similarity consists merely in the possession of parts or qualities or features of the same kind.

3 (a)

T—Of them (the seven categories), the Substances are only nine—*viz.*: earth, water, light, air, ether, time, space, soul and mind.

The word 'only' in this text is intended to exclude 'darkness', which, according to Mīmāṃsakas, is a distinct substance. The Mīmāṃsakas argue that on the strength of the experience which associates blue colour and movement with darkness, it should be regarded as a substance; and it cannot be any of the nine substances mentioned above. So, it should be given a distinct place as the tenth substance in the list of substances. The Naiyāyikas point out that the experience which associates colour and movement with darkness is erroneous. For, a substance having colour can be seen only in the presence of light; and darkness, which is seen in the absence of light, cannot be a substance having colour. In fact, darkness, according to Naiyāyikas,

is nothing but the total absence of such light as is effectual in normal perception.

In the text under consideration, substances are divided into nine classes. This may be taken to be a definition of substances from the point of view of extension. But the Nyāya method of exposition, according to Vātsyāyana (Nyāya-Bhāṣya—1-2-3 Avatārikā) recognises that expository scheme to be perfect, which consists of *uddeśa* (enumeration accompanied by *vibhāga* or division), *lakṣaṇa* (definition) and *parīkṣā* (investigation). Thus a mere enumeration or division of substances will not do and they should be defined. A substance is usually defined as that which possesses the *jāti* (generic attribute) called *dravyatva* (substance-ness); or as that in which a quality (*guṇa*) or activity (*kriyā*) inheres; or that which is fit to be treated as the inherent cause (*samavāyi-kāraṇa*) of some effect. Of these alternatives, the second and third, based on quality and activity, are not applicable to substances in the first moments of their creation; for, according to the Naiyāyika theory of causation, every cause should necessarily precede its effect, and qualities and activities, which are the effects of substances, require at least one moment before they



could come into being. If the function of a definition should be to provide a valid reason (*hetu*) for inferring difference from others and if inference should be of something which is not already comprised in the connotation of the minor term (*pakṣa*), substance-ness (*dravyatva*), which is connoted by the term *dravya*, would not form a satisfactory definition. In such circumstances, by using quality or activity and without directly using *dravyatva*, a substance is defined as a thing possessing a *Jāti* (generic attribute), which is not *sattā* (existence) and is co-existent with a quality or activity. This kind of ingenious device, which is commonly adopted by the Naiyāyikas, is known as *jātighaṭita-lakṣaṇa*.

In this connection, it would be of advantage to elucidate briefly the Naiyāyika's view of definitions and their functions. A definition in Nyāya is not merely an explication of the connotation of a term; but it is a proposition specifying the difference or the differentiating feature of the species or the thing defined. A *lakṣaṇa* is a specific feature or *asādhāraṇa-dharma*. The term *asādhāraṇa* means that which is free from the three faults of a definition—viz.: over-applicability (*ativyāpti*), partial

inapplicability (*avyāpti*) and total inapplicability (*asambhava*). A definition, that is too wide and that consists of an attribute which is present in things sought to be defined as well as those not intended to be defined, has the defect of *ativyāpti*; while a definition which does not apply to some of the things defined has the defect of *avyāpti*; and one which is wholly inapplicable to any of the things defined has the defect of *asambhava*. Such a specific feature (*asādhūraṇadharmā*) is reciprocally co-extensive with the adjunct that delimits the scope of *lakṣyatā* (being sought to be defined):—in other words, wherever that feature is, *lakṣyatāvacchedaka* or the delimiting adjunct of *lakṣyatā* is; and wherever the latter is, the former is. In the case of a cow or an ox (*gauḥ*), for instance, *gotva* or bovineness is the *lakṣyatāvacchedaka*, when all the quadrupeds of the bovine species, and none else, are sought to be defined. In this case, brown colour or uncloven hoof would be too narrow to constitute a definition—the former, which is applicable only to some of the *lakṣyas*, being vitiated by the fault of *avyāpti* (partial inapplicability) and the latter, which is applicable to none of them, being vitiated by *asambhava* (total inapplicability); while having

horns would be too wide and therefore vitiated by the fault of *ativyāpti*. It will be seen, from this, that the Nyāya view of the function of a definition is primarily, differentiation, and incidentally, designation also, while the latter is the only conceivable function in certain cases. "*Vyāvṛttir vyavahāro vā lakṣaṇasya prayojanam*":—is an oft-quoted dictum in Nyāya literature. *Vyāvṛtti* or differentiation consists in the inference of difference from the other things. Smell in the case of earth or rationality in the case of a man forms a differentiating *lakṣaṇa* and serves as a valid reason leading to the inference of difference from *not-earth* in the former case, and from *not-man* in the latter. What helps in differentiation also helps in specific designation. All *vyāvartakalakṣaṇas* are thus *vyāvahārikalakṣaṇas* also. In certain cases like nameability (*abhidheyatva*), all things (*padārtha*) are intended to be covered by the definition; but no differentiation is possible, as nothing can be said to be other than a *thing* (*padārtha*); and in such cases the only function of *lakṣaṇa* is designation (*vyavahāra*).

It would be interesting to observe here that *lakṣaṇas* or definitions are as important on the

positive side in the *pluralistic realism* of the Nyāya-Vaiśeṣika system, as they are on the negative side in the *monistic phenomenalism* of the Advaita Vedānta. In the former system, *lakṣaṇas* are helpful in arriving at, and maintaining the reality of, several self-contained and mutually exclusive units, which, according to the Advaitic monist are but fragmentary appearances of the *one absolute* ; while, in the latter system, *lakṣaṇas* are but so many unsustainable stunts demonstrating the futility of the differentiating efforts of the fissiparous phase of human intellect and the soundness of the doctrine of indefinability (*anirvacanīyatā*), which the Advaitins seek to uphold.

It may also be useful to remember here that the conception of substance (*dravya*) as the substratum of qualities and movements is the bed-rock of the realism of Nyāya ; and one has only to show the hollowness of the Nyāya distinctions of substance (*dravya*), quality (*guṇa*) and movement (*karman* or *kriyā*), in order to knock off the bottom of the Nyāya realism.

3 (b)

T—Colour, taste, smell,
 touch, number, size, separate-

A PRIMER OF INDIAN LOGIC [PART III]

ness, conjunction, disjunction, remoteness, proximity, weight, fluidity, viscosity, sound, cognition, pleasure, pain, desire, dislike, volition, merit, demerit, tendency:—these are the twenty-four qualities.

Patañjali, in his Mahābhāṣya, describes a *guṇa* as something which inheres only in a substance and, under certain circumstances, ceases to be there; which is found in different species of substances but eternal in some cases and non-eternal in other cases.

“Sattve nivīśate'paiti pṛthagjāliṣu vartate.

Ādheyaścākriyājaśca so'sattvaṇprakṛtirguṇaḥ.”

This is Patañjali's definition of a *guṇa*. It is generally adopted by all the grammarians (*Vaiyākaraṇas*) and it amounts to this in plain language :—a *guṇa* may be eternal or non-eternal and inheres in a substance; but it is neither a substance nor an activity. The *Vaiyākaraṇa*'s conception of a *guṇa* for all practical purposes, is the same as the *Naiyāyika*'s conception of it. The *Mīmāṃsakas* sometimes use the term *guṇa* in the sense of a quality and sometimes in the

general sense of something that is ancillary and comparatively unimportant. The term *guṇa* is sometimes used in the sense of literary merit and also in the general sense of a good feature. The Sāṅkhya sense of the word is the component strands of the composite primordial matter called *prakṛti* which consists of the three *guṇas*—goodness (*sattva*), passion (*rajas*) and darkness (*tamas*). The Vedāntins generally use the word *guṇa* in the sense of an attribute or *dharma*. Though the term *guṇa* is thus greatly ambiguous in Sanskrit philosophical literature, the Naiyāyika's technical use of this term is sufficiently precise and does not admit of confusion.

It would be difficult to justify the need for giving a distinct place in the Naiyāyika's list of *guṇas*, to *prthaktva*, *vibhāga*, *paratva* and *a-paratva*. *Prthaktva* (separateness) is not materially different from *difference* which, according to Naiyāyikas, is *anyonyābhāva* or reciprocal negation—a species of non-existence. *Vibhāga* (disjunction) could hardly be distinguished from *Samyogānāśa* (loss of contact). What are remoteness and proximity (*paratva* and *a-paratva*) but space-relation or time relation, the former consisting in



a larger number of intervening *saṁyogas* (contacts) or *viprakṛṣṭatva* and the latter in a smaller number of intervening *saṁyogas* or *sannikṛṣṭatva* ? In fact, some Navya-Naiyāyikas are prepared to discard these *guṇas*, on the grounds indicated. The realistic obsession of the Nyāya-Vaiśeṣika writers, who often go to the length of finding in the external world an objective reality corresponding to every thought and every word, is mainly responsible for the retention of these qualities in the traditional list of *guṇas*.

It would be useful to note here that the Nyāya system draws a distinction between *viśeṣa-guṇas* and *sāmānya-guṇas*. Colour, smell, taste, touch, viscosity, natural fluidity, cognition, pleasure, pain, desire, hatred, effort, merit, demerit, reminiscent impressions—these are *viśeṣa-guṇas*; and the rest are *sāmānya-guṇas*. The former are special qualities, as the name *viśeṣa-guṇas* signifies; and they are special qualities in the sense that they are never found to be common to two classes of substances, or to be more accurate, that a *viśeṣa-guṇa*, in the specific form in which it is actually found, has a *jāti* which is not present in any quality co-existing with two classifying attributes (*vibhājakopādhi*) of

substances. It is easy to see how the rest are *sāmānya-guṇas* or general qualities.

3 (c)

T—Activity or motion is of five kinds :—upward motion, downward motion, contraction, expansion and going or movement from one place to another.

Kaṇāda's traditional classification of *karma* (activity) is here followed, though the classification is unsatisfactory, as pointed out by Nīlakaṇṭha in his *Prakāśikā* and by several others. It is obvious that *gamana* in a broad sense would include all other varieties of activity. In common parlance, *karma*, *kriyā* and *kṛti* are used as synonyms. In Śāstraic terminology, *kṛti* is equivalent to *yatna*, which is the inner volitional process immediately and invariably preceding a voluntary activity. In this sense *kṛti* should not be confounded with *kriyā* or *karma*. The Nyāya-Vaiśeṣika system distinguishes between voluntary activity (*yatna-pūrvaka-kriyā*, or as it is sometimes called *ceṣṭā*) and involuntary activity (*a-yatna-pūrvaka-kriyā*). The term *karma* used in the sense of *kriyā* should be



A PRIMER OF INDIAN LOGIC [PART III]

distinguished from the syntatic *karma* (object); and it should be also differentiated from *karma*, used in the sense of the unseen impression or vestige which every work leaves behind it and which shadows the doer. It is in this latter sense that the word *karma* should be understood in phrases like the 'Karma theory' and '*prārabdha-karma*.'

According to Vaiśeṣikas and Naiyāyikas, the essential feature of every activity is to bring about disjunction (*vibhāga*), then the destruction of conjunction with a previous spot (*pūrvadeśasaṁyoga-nāśa*) and lastly conjunction with a further spot (*uttaradeśasaṁyoga*). The origin of a *kriyā* occupies one moment (*kṣaṇa*); and the three factors that follow its origin—separation, loss of prior contact and further contact—occupy each one moment. An activity, thus, fulfils its purpose completely in the fourth moment (*kṣaṇa*), as soon as the further contact (*uttaradeśasaṁyoga*) arises and comes to an end in the fifth *kṣaṇa*. Every activity lasts only for four *kṣaṇas*. An important corollary deducible from these facts is that one *karma* can never *cause* another *karma*; for, an activity cannot be said to be caused in the second or third or fourth *kṣaṇa* of a prior activity, the prior contact being destroyed by the

disjunction resulting from the prior activity, the later activity having no purpose to serve in the second or third or fourth *kṣaṇa* of the prior activity, and the fifth *kṣaṇa* being one in which the prior activity comes to an end and cannot, therefore, be associated with the later activity as its cause. In this connection, it should be remembered that a *kriyā* cannot be conceived of otherwise than as direct and independent cause of disjunction and as leading to further contact, through loss of prior contact; for, according to Kaṇāda and Gautama, to go to is to forego, or, in other words, to quit, to sunder and touch further on. (*Kriyā, tato vibhāgaḥ, tataḥ pūrvadeśasaṁyoganāśaḥ, tataḥ uttaradēśa-saṁyogaḥ, tataḥ kriyānāśaḥ*). It may also be noted here that the Vaiśeṣikas and Naiyāyikas use any one of these five factors, from the origin of *kriyā* down to its cessation, as the delimiting condition (*upādhi*) of a *kṣaṇa*, which is regarded as the smallest unit of time.

The Nyāya-Vaiśeṣika conception of *kriyā* stands in sharp contrast with the Vaiyākaraṇa view of this category. According to the Vaiyākaraṇas a *kriyā* is what is usually denoted by a verbal root (*dhātu*) and it is ordinarily a process consisting of many

A PRIMER OF INDIAN LOGIC [PART III]

activities (*vyāpārāḥ*) arising in succession. In its fully accomplished state (*siddhāvasthā*), a *kriyā* is denoted by a substantive like *pāka*; and when it is being done or in its *sādhyāvasthā*, it is denoted by the radical element in a finite or infinitival verb.

It would be worthy of notice here that the Naiyāyikas and the Bhāṭṭa-mīmāṃsakas maintain that a *kriyā* is perceptible and may be visualised under certain conditions; whereas, the Prābhākaras hold that it falls beyond the scope of the senses and it comes to be known only through inference from further contact preceded by disjunction (*vibhāga-pūrvakasamyoga*). It should also be remembered that Indian philosophers, like Śaṅkara, draw pointed attention to the fundamental difference between a *kriyā* and a *jñāna*, which consists in the former being such as directly falls within the scope of the will (*puruṣatantra*) and the latter never coming within the scope of the will but having its nature determined by its object (*vastutantra*.)

3 (d)

T—Generality is of two kinds—the more comprehensive and the less comprehensive.

3 (e)

T—Particularities, on the other hand, abide in eternal substances and are innumerable.

3 (f)

T—Whereas, inherence is merely one.

In common speech, *sāmānya* means a common feature; but, in the technical language of Nyāya, it is equivalent to *jāti* and is understood to stand for a generic feature which inheres in all the individuals constituting a class and is eternal. The individual units (*vyakti*) of a class may come and go but the generic attribute common to the whole class exists for ever. Humanity, or more literally *man-ness*, (*manuṣyatva*), which is common to all man and, is eternal and it existed before the origin of man and will continue to exist even after the annihilation of all mankind. A *jāti*, in this technical sense, is connected with a *vyakti* through the intimate relation known as *samavāya* or inherence. An attribute may be common to several individuals and connected with them either through the direct rela-



tion of *svarūpa-sambandha*, the related object itself being looked upon as relation, or through some indirect relation (*paramparā-sambandha*); such an attribute is called *upādhi* and should not be confounded with a *jāti*. *Mūrtatva*, for instance, is not a *jāti*; and it amounts to "being the seat of an activity" *kriyāśrayatvam*. It is sometimes called *sakhaṇḍopādhi*—a feature which admits of being defined and stands in need of the help of a definitive expression for its definite comprehension; and in this sense, a *sakhaṇḍopādhi* is said to be *nirvacanīya*. A *jāti* like *potness* (*ghaṭatva*) is *anirvacanīya*—does not stand in need of the help of a definitive expression for its comprehension. The Naiyāyikas recognise certain generic attributes called *akhaṇḍopādhis*, which are not *jātis* but similar to them in all respects except that the relation of the former to their *āśeṣas* is self-link (*svarūpa-sambandha*)—the related thing itself constituting its own relation—and that it is not inherence (*samavāya*) as in the case of *jāti*. *Viśaya* is object; *viśyatā* is object-ness; *viśayatā-tva* is being object-ness and is an *akhaṇḍopādhi*. *Pratīyogin* is correlative; *pratīyogitā* is correlativeness; *pratīyogitātva* is being correlativeness and is an *akhaṇḍopādhi*. Under which of the



CSL

PERCEPTION

25

seven categories should an *akhaṇḍopādhi* be brought? In reply to this question, a Naiyāyika would say that it could be brought under *sāmānya*, if that term should be understood to mean all generic attributes—*jāti*s and *akhaṇḍopādhi*s. Or, if the term *sāmānya* should be restricted to a *jāti*, an *akhaṇḍopādhi* could not be brought under any of the seven categories. It should be remembered in this connection that these two kinds of generic attributes (*jāti* and *akhaṇḍopādhi*) are the only things that are presented in thought, by themselves, without the help or mediation of their attributes (*svarūpatobhāna-yogyāḥ*); and that thought grasps other things only under the aspect of, or only through the mediation of, a qualifying attribute (*kimcitprakārapuraskāreṇaiva bhānayogyāḥ*). In Nyāya terminology, a distinction is sometimes made between *akhaṇḍa-sāmānya* and *sakhaṇḍa-sāmānya*, the former being a *jāti* directly connected with a *vyakti* and the latter being a generic attribute which is reducible to a *jāti* connected with a *vyakti* through some indirect relation (*paramparāsambandha*). For instance, *kriyātva* (motion-ness) is an *akhaṇḍa-sāmānya*; while *mūrtatva* is a *sakhaṇḍa-sāmānya*, as it is equivalent to *kriyāśrayatva* (possessing an



activity), which is a generic attribute common to all the *mūrtas*—earth, water, fire, air and mind, and may be said to consist in the *jāti*—*kriyātva*—being present through the indirect relation—*svasamavāyī-samavāyitva* (being the intimate substratum of its own intimate substratum).

How do the Naiyāyikas show that it is necessary to recognise *sāmānya* or *jāti* as a distinct category? Our experience, in several cases where it relates to diverse objects, exhibits a certain degree of uniformity. When we see a human being or a beast, our experience, howsoever it may differ in other respects, invariably takes the form—‘this is a man’ (*ayam manuṣyaḥ*) or ‘this is a beast’ (*ayam mṛgaḥ*). The uniformity that we thus observe in our experience cannot be accounted for otherwise than through the assumption of a generic feature common to all mankind or all the beasts. This generic feature is called *manuṣyatva* (humanity) in the case of human beings and *mṛgatva* (beasthood) in the case of beasts. Parsimony in thought is relied upon by the Naiyāyikas as a criterion of soundness, when it does not clash with any other criterion which is stronger or more reliable. The principle of economy or the law of parsimony or



or the *lāghava-nyāya* determines the nature of many a hypothesis in Nyāya and other systems of Indian thought. According to this principle, a generic feature like *manuṣyatva* or *mṛgatva* should be taken to be eternal, one and connected with men or beasts through the intimate and eternal relation called *samavāya* (inherence). In one word, it should be taken to be a *jāti* in the technical sense, in the interest of *lāghava*, so long as there is nothing preventing the hypothesis of *jāti* being put forward in the case under consideration. Thus, through perceptual experience, one might arrive at a *jāti*, in order to account for uniformity in such experience. There are several cases in which perceptual experience of a whole class is impossible or it happens to be restricted to a few and not accessible to all. For instance, in the case of substances (*dravya*), only three of them—earth, water and fire—are perceptible to the external senses, some of their varieties being imperceptible. Though *ātman* (spirit or soul) is perceptible to the inner sense called *manas* (mind), its existence as a *dravya* cannot be taken for granted at the stage at which the *jāti*—*dravyatva* (substanceness) is yet to be established. In such circumstances, the Naiyāyikas

A PRIMER OF INDIAN LOGIC [PART III]

maintain the necessity for recognising a *jātī* by means of inference (*anumāna*) aided by the principle of parsimony (*lāghava*). By way of illustration, their argument to establish *dravyatva* may be set forth here. Only a substance can be *samavāyīkāraṇa* (intimate cause or inherent cause). Human thought, in respect of causality (*kāraṇatā*) as in other respects, shows a habitual preference for compactness and unity. The conception of *kāraṇatā* could serve some useful purpose in life, only when it takes a definite and comprehensive form; and it cannot take a form which is at once definite and comprehensive, so long as it is not specifically delimited in its scope by a comprehensive and definite adjunct. In other words, a suitable delimiting adjunct of *kāraṇatā* (*kāraṇatāvacchedaka*), besides a similar delimiting adjunct of *kāryatā* or effectness (*kāryatāvacchedaka*), should be thought of in the case of every comprehensive and definite statement of causal relation (*kārya-kāraṇa-bhāva*). The need for such a statement being taken for granted in the case of the *samavāyīkāraṇatā* belonging to substances as a class, it follows that this *kāraṇatā* is definitely determined in its scope by a delimiting adjunct which is common to all the

substances. Such a delimiting adjunct in the case of *samavāyikāraṇa* (*samavāyi-kāraṇatāvacchedaka*) is called *dravyatva*. Economy in thought, in the absence of any outweighing disadvantage or difficulty, would necessarily lead to *dravyatva* (substanceness) being assumed to be eternal (*nitya*), one (*eka*) and connected with all the substances through *samavāya*, i.e.:—a *jāti* in the technical sense. This argument is usually stated in Sanskrit thus :—

“*Dravyaniṣṭhā samavāyikāraṇatā (guṇam, saṁyogam, vibhāgam vā prati), yatkiṁcidanugatadharmāvacchinnā, kāraṇatāt-vāt, daṇḍaniṣṭhaghaṭakāraṇatāvat.*”

Some *jātis* like *dravyatva* (substanceness) are more comprehensive (*para*) as compared with *prthivītva* (earthness) and less comprehensive as compared with *sattā* (existence); while *ghaṭatva* (potness) is the least comprehensive (*apara*) of all the *jātis* in the series of *jātis*—*sattā*, *dravyatva*, *prthivītva*, *ghaṭatva*. In every series of *jātis*, it will be seen that *sattā* is the most comprehensive *jāti* and is the generic attribute characterising the one *summum genus* recognised in the Nyāya-Vaiśeṣika system, which may be called *sat* and to which Kaṇāda gives the technical name *artha*. Every

A PRIMER OF INDIAN LOGIC [PART III]

series of *jāti*s ends with its own *antya-jāti*, which characterises its *infima species*. Thus in the Nyāya-Vaiśeṣika system, while there are several *antya-jāti*s and diverse *infimæ species*, there is only one highest *jāti viz.:*—*sattā* and one *summum genus*. *Jāti*s, including *sattā*, can inhere only in substances, qualities and activities (*dravya*, *guṇa* and *karma*), and cannot inhere in any other category. The predication of *sattā* with reference to the remaining positive categories, *sāmānya*, *viśeṣa* and *samavāya*, is explained away by the Naiyāyikas, on the basis of co-inherence, and not on the basis of inherence. Propositions like '*dravyam sat*', '*guṇaḥ san*', '*karma sat*' convey that *sattā* inheres in a *dravya* or *guṇa* or *karma*; whereas the propositions—'*sāmānyam sat*', '*viśeṣūḥ santaḥ*', '*samavāyaḥ san*'—should be interpreted as referring to the co-inherence of *sāmānya*, *viśeṣa* and *samavāya* with *sattā* in the same place.

In his Sūtra, "*Sāmānyam viśeṣa iti buddhya-pekṣam*" (ch. I-āh-2-sū 3), Kaṇāda observes that 'generality and speciality are dependent upon the nature of the view-point'. Some modern writers on Indian logic, more especially some writers in English, are misled by this Sūtra into the belief that

Kaṇāda was in favour of a conceptualist view of *sāmānya* and would reduce it to a conceptual factor existing only in thought. This misapprehension results from an imperfect knowledge of Kaṇāda's position. Kaṇāda maintains, partly in an explicit way and implicitly in part, that *jāti*s are eternal universals, existing outside the sphere of thought in the same sense in which other realities exist; and that a *jāti* is looked upon as a generic feature (*sāmānya*) or a specific differentia (*viśeṣa*), according as it is conceived of as a unifying or differentiating factor. For instance, substantiveness (*dravyatva*) is a *sāmānya*, when it is looked upon as a generic feature common to all the substances; but it is a *viśeṣa* when it is looked upon as the differentia of substances, by means of which they are distinguished from other things like qualities and activities. One could clearly see how solicitous Kaṇāda really is to establish the reality of *jāti*s, from the significant way in which he uses the phrase *antya-viśeṣa* to designate the distinct category known as *viśeṣāḥ*, so that they may not be confounded with *jāti*s looked upon as differentia.

To philosophise, according to the exponents of the Nyāya-Vaiśeṣika system, is to unify, wherever



A PRIMER OF INDIAN LOGIC [PART III]

CSL

possible, through universals arrived at on the basis of observed similarities or uniformities, and to ramify and differentiate, wherever fidelity to experience requires it, through differentiating features arrived at from observed dissimilarities. This process, in the direction of generalisation, has led to several *jātis* being recognised, and in the direction of differentiation, has resulted in the hypothesis that a unique, self-differentiated and everlasting feature called 'particularity' (*viśeṣa* or *antya-viśeṣa*) should be attributed to every everlasting substance that could not be otherwise distinguished from similar everlasting substances. Composite substances like a jar or a cloth, made of component parts, can easily be distinguished from each other by means of the different parts constituting them. Eternal substances, which are alike in respect of *guṇa*, *karma* and *jāti*, like the eternal atoms of earth, water, fire or air, cannot be distinguished from similar substances of the same class, without ascribing to them some unique feature called *viśeṣa*. In our perceptual experience, one thing is differentiated from another thing through a distinguishing feature. As a matter of fact, in the super-normal perceptual experience (*alaukika-pratyakṣa*) of seers and Yogins, one atom

of earth is distinguished from another atom of earth; in such cases, there must be a differentiating feature; no *guṇa*, *karma* or *jāti* can be relied upon as a distinguishing feature, for in those respects, all atoms of earth are alike; even the super-normal perception of a Yogin cannot change the fundamental nature of things (*vastu-svabhāva*) and cannot see a man as a beast or a horse as an ass; it is the fundamental nature of perception, both normal and super-normal, that it distinguishes one object from another through a distinguishing feature; and thus, the perception of one atom of earth as distinct from another atom of the same kind, super-normal as it happens to be, should be accounted for by ascribing to each atom of earth a unique feature called *viśeṣa*. By following the same line of argument, it would be necessary to ascribe a *viśeṣa* to each of the atoms constituting producible substances (*janya-dravya*).

These *viśeṣas* should be taken to be self-discriminating (*svato-vyāvartaka*) or self-differentiated (*svatovyāvṛtta*). If a *viśeṣa* were to be differentiated from another *viśeṣa* or from any other object through some distinctive feature other than *itself* or its own *svarūpa*, it would lead to an endless assumption of distinctive features and this line of thought cannot

A PRIMER OF INDIAN LOGIC [PART II]

be sound as it is vitiated by *anavasthā* or endless regression. It follows necessarily that each *viśeṣa* stands isolated and unique; and *ex hypothesi*, even a *jāti* called *viśeṣatva*, common to all the *viśeṣas*, becomes inadmissible for the reason that a *viśeṣa* would cease to be self-discriminating were it to be associated with a *jāti*, every *jāti*—including *sattā*—turning out to be a differentia in cases of contrast with things devoid of that *jāti*.

All the Vaiśeṣikas and Naiyāyikas agree that each atom should be taken to have a unique *viśeṣa* inherent in it, that the relation between a *viśeṣa* and its abode is inherence (*samavāya*), and that *viśeṣas* are eternal. There is, however, some difference of opinion as to whether every eternal substance should be taken to have a *viśeṣa*. It is necessary that each *jīva* (individual soul) and each *manas* should be assumed to have a unique *viśeṣa*; for, though, when a *jīva* is in a state of bondage (*baddha*), he and his mind could be shown to have distinctive features in the form of distinctive experiences and such other characteristics, yet neither a liberated (*mukta*) *jīva* nor his mind could be differentiated from other liberated *jīvas* and their minds, without ascribing to each of

them a unique *viśeṣa*; and there can be no difference of opinion about this matter among the Naiyāyikas. With regard to ether (*ākāśa*), while some Naiyāyikas hold that a *viśeṣa* should be ascribed to it as the delimiting determinant of its causality of sound (*śabda-samavāyi-kāraṇatāvacchedaka*), others hold this is unnecessary. In the case of spatial direction (*dik*) and time (*kāla*), if they are recognised to be distinct substances, they should be taken to have distinctive *viśeṣas*; but, while the earlier Naiyāyikas recognise *dik* and *kāla* to be eternal substances, distinct from others, the later Naiyāyikas, like *Raghunātha-śīrōmaṇi*, would bring *dik* and *kāla* under God (*Īśvara*), uncommon attributes like eternal omniscience being quite adequate to distinguish God from the rest, without the help of a *viśeṣa* of His own. It should be remembered in this connection that, when the term *viśeṣa* is taken in its usual sense of *differentia*, the phrase *antya-viśeṣa* is used to describe the unique category known as *viśeṣa*, it being said to be *antya* for the reason that it stands at the end of all differentiating features, or for the reason that it inheres in eternal substances which transcend creation and destruction and are, therefore, denoted by the word *antā*.

36 A PRIMER OF INDIAN LOGIC [PART III]

When two substances come into contact with each other, their relation is called *samyoga*; and this relation is not of an intimate character and is separable. There is another type of relation which determines determinate cognitions of objects as associated with certain attributes (*viśiṣṭa-pratīti*); and this relation when it happens to connect two things of which one, as long as it does not become moribund or cease to exist, is always associated with the other—two things which are technically called *ayuta-siddha*—is known as *samavāya*. This is an intimate type of relation recognised as subsisting between component parts and composite wholes (*avayava* and *avayavin*), qualities and substances (*guṇa* and *dravya*), movements and moving substances (*kriyā* and *dravya*), generic attributes and the individuals forming a class (*jāti* and *vyakti*), and particularities and eternal substances (*viśeṣa* and *nityadravya*). The intimate relation of *samavāya* stands in marked contrast with contact (*samyoga*), which is not an indissoluble relation and is easily lost. With some effort, the Naiyāyikas distinguish *samavāya* from another type of relation recognised by them, which is known as *svārūpa-sambandha* or self-relation and which consists in one of the related

things being looked upon as comprising a relational phase forming a connecting link. For instance, time-relation (*kālika-sambandha*) is time (*kāla*) itself looked upon as a connecting link between time and things limited in time. Numerous varieties of *svarūpa-sambandha* are recognised by the Naiyāyikas in all cases where cognition of an object with its adjunct (*viśiṣṭa-pratīti*), the configuration of which involves three cognised factors—an adjunct (*viśeṣaṇa*), an object qualified by it (*viśeṣya*) and their relation, has to be accounted for through some relation and where that relation cannot be contact or inherence (*saṁyoga* or *samavāya*). The conception of *svarūpa-sambandha* is pressed into service too much by the Naiyāyikas and is pushed too far in their view regarding the relation of *tādātmya* (complete identity), which forms the relation underlying cognitions like this—‘a jar exists in itself’. It is maintained by the Naiyāyikas that, though a relation ordinarily implies difference, the relation of identity should be considered an exception and cannot be ignored since it is presented in valid experience.

The Nyāya conception of *jāti* may, with advantage, be compared with the views held by the Vaiyā-

A PRIMER OF INDIAN LOGIC [PART III]

karaṇas (Grammarians), Bhāṭṭas, Prābhākaras, Bauddhas and Advaitins on this subject. The term *jāti*, according to Indian Grammarians, primarily denotes class-attributes in the Nyāya sense; and terms denoting caste, lineage and followers of a Vedic school are also treated as terms denoting a *jāti* for purposes of the application of certain grammatical rules framed with reference to terms denoting *jāti* (*jātivāci*). The *Bhāṭṭa-mīmāṃsakas* hold that a *jāti* like cowness (*gotva*), horseness (*aśvatva*) is eternal, omni-present and perceptible; that, though present everywhere, it is manifested only in and through the individual objects comprising a class and that such objects are called *vyaktis* chiefly for the reason that they serve to manifest *jāti*; and that their relation to *vyaktis* is not inherence (*samavāya*) but relative identity or identity compatible with difference (*tādātmya*). The relation of *tādātmya*, according to the Bhāṭṭas, is not absolute identity, as the Naiyāyikas take it to be; but it is identity in a relative sense—i.e.: identity (*abheda*) compatible with difference (*bheda-saṁśṛ*). Though difference and identity are ordinarily opposed to each other, yet they are taken by the Bhāṭṭas to be compatible with each other, on the ground that it is experience, after



all, that determines the compatibility or incompatibility of two things and that experience warrants the recognition of difference, associated with identity, as forming the relation between *jāti* and *vyakti*. In the proposition—‘this is a horse’ (*ayam aśvaḥ*), for instance, ‘this’ refers to a particular *vyakti* and ‘horse’, according to the Bhāṭṭas, primarily refers to horseness (*aśvatva*), which is a *jāti*. According to this view, in the judgment embodied in this proposition, a *jāti* is equated with a *vyakti*. But this equation cannot be absolute as, in that case, the two words ‘this’ and ‘horse’ would turn out to be synonyms. Therefore, the Bhāṭṭas argue that, on the strength of what is presented in cognition, a peculiar relation consisting in difference-cum-identity (*bhedābheda*), should be recognised in the case of *jāti* and *vyakti*. While Naiyāyikas restrict *jāti*s to the first three categories—substances, qualities and activities, the Bhāṭṭas ascribe the highest or the most comprehensive *jāti* called existence (*sattā*) to those three categories and also to the fourth category, generality (*sāmānya*). The Prābhākaras, on the other hand, contend that a *jāti* or generic attribute can be recognised only in perceptible substances, and any common attribute which cannot be per-



ceived alike by the learned and illiterate in *vyaktis* should not be regarded as a *jāti*. It would follow from this that cowness (*gotva*) and such other attributes may be regarded as *jātis*; while existence (*sattā*), substanceness (*dravyatva*), and such other attributes are not *jātis*. According to these philosophers, the relation between a *jāti* and *vyakti* is inherence (*samavāya*), as in the Nyāya system, the relation of *lādātmya* consisting in difference-cum-identity being discarded as an impossible jumble.

The Buddhistic idealists would reduce all *jātis* to the negative form of 'difference from the rest' (*svetarabheda*), cowness (*gotva*), for instance, being no more than difference from things other than a cow (*gavetarabheda*). They ridicule the Nyāya doctrine of *jāti* in this strain:—
"Eternal cowness, dogness, assness and such other *jātis*—where do they exist, after all the cows, dogs and asses cease to exist at the time of universal dissolution (*pralaya*)? Do they exist in God? To say so would be blasphemy. When a dog or an ass or a cow dies, does its *jāti* leave it? It cannot do so, for the reason that only substances can move. When a cow is just born, how does it come to have cowness? It cannot be said that cow-

ness is produced in a new-born calf; for *jāti* is eternal and has no origin. Nor can it be said that a *jāti* loses some of its parts when a *vyakti* ceases to exist and acquires additional parts as new *vyaktis* are produced; for eternal *jātis* can have no parts. Indeed, in your doctrine of *jāti*, you have brought a hornet's nest to your ears." The Advaitic monists of the *post-Śaṅkara* and *pre-Śaṅkara* stages in the history of Indian monism cleverly use the Nyāya theory of *jāti* to their profit, by showing that the highest *jāti*, existence (*sattā*), is the grand generality (*mahāsāmānya*), which represents the only absolute reality called *Brahman*, and that the various *vyaktis* and smaller *jātis* like *gotva* and *aśvatva* are but appearances super-imposed upon the absolute *sattā*.

Inherence (*samavāya*) is recognised by Prābhākaras in cases where two inseparable things (*ayuta-siddha*) are intimately connected with each other; but it is taken to be eternal in cases where both the related objects are eternal and non-eternal in other cases. It is the obsession of economy (*lāghava*) that has led the Naiyāyikas to hold that inherence is eternal and one. In the place of *samavāya*, the Bhāṭṭas and Advaitins recognise the relation of difference-cum-identity (*tādātmya*). *Viśeṣas*, in the

A PRIMER OF INDIAN LOGIC [PART III]

sense in which the Vaiśeṣikas and Naiyāyikas recognise them, are not recognised by other Indian philosophers, who find it easy to disprove the necessity for recognising *viśeṣas* by pointing out that the self-discriminating capacity ascribed to *viśeṣas* might be attributed, with advantage, to eternal substances themselves.

In order to completely understand the Nyāya doctrine of *jāti*, it is necessary to pay some attention to the principles which Udayanācārya, one of the greatest exponents of Nyāya in the tenth century, laid down for determining which of the numerous common attributes presented in one's experience should be treated as *jātis* and which should not be. These principles are six:—(1) the individuals in question being only one (*vyaktyabheda*); (2) the individuals in question being the same—neither more nor less (*tulyatva*); (3) attributes which exclude each other in some places being found together elsewhere (*saṃkara*); (4) endless regression (*anavasthā*); (5) giving up the distinctive feature made out *ex hypothesi* (*rūpahāni*); (6) and the absence of the necessary relation (*asambandha*). In his *Kiraṇāvalī*, Udayana sums up these six principles in this verse:—

“*Vyakterabhedastulyatvam saṅkaro'thūnavasthitiḥ;
 Rūpahānirasambandho jātibādhakasaṅgrahaḥ.*”

Etherness (*ākāśatva*) cannot be a *jāti*, for the obvious reason that, according to Naiyāyikas, ether is eternal and one and that there is no question of forming a class consisting of several similar individuals. There can be no distinction between jar-ness and pot-ness (*kalaśatva* and *ghaṭatva*), as the jars or pots, which form the class in view and to which the generic attribute in question is ascribed, happen to be the same. Senseness (*indriyatva*) co-exists with element-ness (*bhūtatva*) in the external senses like the visual sense constituted by fire; *indriyatva* is dissociated from *bhūtatva* in the mind (*manas*), which is not a *bhūta*; *bhūtatva* alone exists in a jar, which is made of earth and not a sense; the only possible relations that are warranted by experience, between two attributes recognised to be *jātis*, are inclusiveness and mutual exclusiveness; for instance the sphere of *dravyatva* includes that of *ghaṭatva*, while *ghaṭatva* and *paṭatva* (jar-ness and cloth-ness) are mutually exclusive; so, neither *indriyatva* nor *bhūtatva* can be regarded as a *jāti*, on the ground of unwarranted blend (*sāṅkaryā*). If all the *jātis* were to be supposed as having a *jāti* common to



A PRIMER OF INDIAN LOGIC [PART III]

them there would be endless regression in this way. Suppose the *jātis* we start with are three—*a*, *b* and *c*; if we assume that these three *jātis* have a *jāti* common to them called *x*, the total number of *jātis* would become four—*a*, *b*, *c* and *x*; and having committed ourselves to the position that there should be a *jāti* common to all *jātis*, the meaning of the word *all* will increase at every step by one more *jāti* being added to the list and we should go on assuming an endless series of *jātis* common to all *jātis*, like *x*, x^1 , x^2 , x^3 . Thus, on the ground of endless regression (*anavasthā*), a *jāti* called *jālitva*, common to *all jātis*, cannot be recognised. To say that *viśeṣatva* is a *jāti* common to all the *viśeṣas* would be fatal to the distinctive feature of self-differentiation (*svato-vyāvartakatva*), which is ascribed *ex-hypothesi* to *viśeṣas*. The hypothesis of *antya-viśeṣas* (ultimate particularities) is put forward for differentiating eternal substances which could not be otherwise differentiated. If the *antya-viśeṣas* were to have a *jāti*—*viśeṣatva*, common to them, they would cease to be *self-differentiating*; for in the case of objects having *jātis* fit to be treated as *differentiæ*, it is a well-established habit of thought to rely upon such generic *differentiæ* for purposes

of differentiation and not upon the things themselves that have to be differentiated. Thus *viśeṣatva* cannot be treated as a *jāti*, since it would jeopardise the distinctive feature of *viśeṣas*—*svato-vyāvartakatva* and thus involve *rūpahāni*. Negation-ness (*abhāva-tva*) is a feature common to all the varieties of non-existence (*abhāva*); but this common feature cannot be regarded as a *jāti*, for the reason that there is difficulty in recognising the relation of inherence (*samavāya*) as a link serving to make *abhāva* the substratum of any attribute or the attribute of any substratum. In cases like this, the *jātibādha* is called *asambandha*, the required relation of inherence being impossible.

Sāmānya and *viśeṣa* may appropriately be described as the two poles of the pluralistic realism of the Nyāya-Vaiśeṣika system. *Sattā*, the highest *sāmānya*, to which the Naiyāyikas rise with a true philosophic instinct, is not allowed to exhibit itself in its full glory as the all-comprehending absolute reality. Between the two poles of *sāmānya* and *viśeṣa*, the pluralistic universe of Nyāya is sought to be fitted to a threefold scheme of external relations—contact (*saṁyoga*), self-linking relation (*svarūpa-sambandha*) and inherence (*samavāya*)—a scheme

A PRIMER OF INDIAN LOGIC [PART III]

which, with the eternal and intimate relation of *samavāya*, turns out to be the Procrustean bed of Nyāya thought. The Nyāya doctrines of *sāmānya*, *viśeṣa* and *samavāya* exhibit fatal weaknesses. If uniformity of experience should necessitate the assumption of *sāmānya* and if the principle of parsimony (*lāghava*) should lead to a *sāmānya* being taken to be eternal, strict consistency in thought would necessarily result in one absolute all-comprehending reality in the shape of *sattā* being recognised and thus the Advaitic monist would find it easy to demolish the pluralistic realism of Nyāya. If *antya-viśeṣas* should be taken to be self-discriminating to avoid *anavasthā*, why should not the self-discriminating capacity, ascribed to them, be attributed to such eternal substances as could not be otherwise distinguished and thus save the Nyāya thought from the cumbersome doctrine of *viśeṣas*? The Nyāya philosopher, who takes *samavāya* to be eternal and one and yet seeks to avoid inherence of colour (*rūpa-samavāya*) being absurdly jumbled together with the inherence of touch (*sparsa-samavāya*) in air, which is a colourless substance, is only swallowing a camel but straining at a gnat, when he refuses to accept the relation of relative identity (*tādātmya = bhedābheda*) in the

place of inherence on the ground that *bheda* and *abheda* are incompatible.

3 (g)

T—Non-existence is of three kinds :— antecedent non-existence, annihilative non-existence, absolute non-existence and mutual non-existence.

In rendering the term *abhāva*, the two terms non-existence and negation are commonly used. Of these two, the former term is nearer to the Sanskrit word *a-bhāva*; and the latter term is likely to prove somewhat misleading, as it primarily refers to negative expression rather than to the negative category denoted by such expression. In the previous section, it was pointed out that *abhāvatva* could not be treated as a *jāti*. Some Naiyāyikas take *abhāvatva* to be an *akhaṇḍopādhi*, while others describe it as consisting in the negation of *satlā* (existence) through the relation of inherence (*samavāya*) as well as its negation through co-inherence (*ekārtha-samavāya*). *Abhāva* is defined as a thing which neither has *samavāya* nor is *samavāya*.



Things which are yet to be produced are referred to as non-existent prior to their production. When threads are ready and a cloth awaits production, it is said "Here, a cloth will come into being" (*atra paṭo bhaviṣyati*). Such expressions conveying the non-existence of a product prior to its creation should be relied upon as evidence of antecedent non-existence (*prāgabhāva*). According to the Naiyāyikas, every producible object (*kārya*) is invariably preceded by its own antecedent non-existence (*prāgabhāva*), which is also regarded as a necessary part of the causal machinery required for producing an effect. This forms an important element in the creationistic theory of causation upheld by the Naiyāyikas. They maintain that a *prāgabhāva* has no beginning but comes to an end at the moment of the creation of its counter-correlative (*pratiyogin*)—which is the product in question; that its abode is invariably the intimate or material cause (*samavāyi-kāraṇa*); that it is destroyed by the complete casual apparatus which immediately produces the effect in question; and that it is usually referred to by an expression which, though affirmative in form, conveys an implied negation—such as "Here the jar *will* come into being" (*atra ghaṭo*

bhaviṣyati). The Nyāya theory of creationism (*ārambha-vāda*) is as inseparably bound up with the view that what is destroyed is annihilated completely and can never arise again, as, on the other side, with the view that what is created is produced for the first time and never existed before. Every created *bhāva* (positive entity) is, therefore, hemmed in between two kinds of non-existence, antecedent and annihilative (*prāgabhāva* and *dhvaṁsa*). *Pradhvaṁsa* is thus produced; and it can never come to an end, since the end of *dhvaṁsa* would mean the regeneration of what is once annihilated—which, according to Naiyāyikas, is impossible. *Dhvaṁsa*, like *prāgabhāva*, abides in the intimate or inherent cause of what is destroyed and it is presented in experiences, such as 'the jar is annihilated' and 'the annihilation of the jar is produced' ('*ghaṭo dhvastah*' '*ghaṭadhvaṁso jātah*'). Some Naiyāyikas of the Nuddea school, like Raghunātha-śiromaṇi, hold that, though it is clearly necessary to recognise *dhvaṁsa* on the strength of certain experiences common to all, it cannot be said that *prāgabhāva* is supported by any such experience and antecedent negation may well be explained as no more than complete non-existence (*atyantābhāva*) viewed parti-



cularly in association with the time preceding the creation of the effect in question. The earlier school of Nyāya, however, argues that, if the prior non-existence of a cloth (*paṭa-prāgabhāva*) were not recognised as a special type of non-existence, having no beginning but coming to an end at the moment at which the cloth comes into being, the absurd result that the same cloth is produced again and again in an endless series of successive moments (*paṭadhārāpatti*) would follow; and that, if the prior non-existence of a cloth be recognised as a special type of non-existence forming one of the factors constituting the causal apparatus of the cloth, no such absurd result would follow, one of the causes of the cloth—*viz.* its own *prāgabhāva* ceasing to exist at the first moment of the creation of the cloth. 'On this spot, there is no jar' (*atra bhūtale ghaṭo nāsti*)—expressions like this, and experiences corresponding to, and embodied in them, refer to a certain type of non-existence which is not restricted to the past, present or future but has reference to all time. In this respect, this variety of *abhāva* stands out in sharp contrast to the two varieties already mentioned—*prāgabhāva* and *dhvaṃsa* and is called *atyantābhāva*,

absolute non-existence, its presence being entirely independent of its counter-correlative (*pratiyogin*) being produced or destroyed. Absolute non-existence (*atyantābhāva*) is eternal and the pluralistic universe of Nyāya is wide enough to accommodate innumerable such *atyantābhāvas*.

The concept of *abhāva* is complex and involves several factors. In order to completely encompass an *abhāva* in thought, one has to think of it in association with five factors—*viz.* : counter-correlative (*pratiyogin*), correlated substratum (*anuyogin*), the determining adjunct of the former which delimits the scope of counter-correlativeness (*pratiyogitūvacchedakadharmā*), the adjunct delimiting the scope of the substratumness (*anuyogitā*), and the relation which determines the counter-correlativeness of an object (*pratiyogitūvacchedakasambandha*). Taking a specific instance of *atyantābhāva*, such as is embodied in the proposition—‘On this spot, there is no jar’ (*atra bhūtaḥ ghaṭo nāsti*), these five factors may be illustrated. What is intended to be denied, or that object the non-existence of which is referred to here, is not a particular jar but the whole class of jars. What is sought to be conveyed is that no jar is present here, not even a single jar. In this



A PRIMER OF INDIAN LOGIC [PART III]

case, jar, in general, is the *pratiyogin* and the sphere of its *pratiyogitā* is delimited by jariness (*ghaṭatva*) i.e.—it is found wherever jariness is found or in every jar. In other words, in this case jariness (*ghaṭatva*) is said to be the *pratiyogitāvacchedakadharmā*. A reference to the non-existence of an object amounts to a denial of its existence. When one thinks of the existence of an object, one has to think of its presence in a certain place through some relation. This relation which is intended to be brought within the scope of the denial kept in view is known as the relation determining the *pratiyogitā* (*pratiyogitāvacchedakasambandha*). In other words, it is the relation through which the counter-correlative is intended to be conceived of as present, in the particular place, if it were present there. The intended relation may vary in different cases. In the case of the *abhāva* referred to in the proposition 'There is no jar in contact with this place' (*atra saṁyogena ghaṭo nāsti*), the relation kept in view as determining the presence of the object denied (*pratiyogitāvacchedakasambandha*) is contact (*saṁyoga*). On the other hand, in the case of the *abhāva* referred to in the proposition—'There is no jar inherent in this place' (*atra samavāyena ghaṭo nāsti*), inherence

(*samavāya*) constitutes such a relation. The former of these two propositions may be true where the non-existence of a jar is predicated as present in the component part of a jar (*kapāla*); while, in that case the latter proposition would not be true. For a *kapāla* may not have any jar in contact with it; but a *kapāla* must have inherent in it the jar of which it is a component part. The place in which the non-existence of an object is said to be present is *anuyogin* and its adjunct which delimits the scope of the substratumness (*anuyogitā*) is called the *anuyogitāvacchedakadharmā*. A specific reference to this is necessary. To say 'there is no jar on this spot' is one thing; and to say 'There is no jar on the earth,' is altogether different. In the former case, *this-spot-ness* (*etadbhūtalatva*) is the *anuyogitāvacchedakadharmā*; and in the latter case it is earthness (*bhūtalatva*)—a feature common to the whole of this world. For the reason that the cognition of *abhāva* is so complex as to comprise these five factors, it is placed on a par with a cognition of an object associated with an adjunct (*viśiṣṭabuddhi*), the *abhāva* itself being treated as the chief object (*viśeṣya*) and the remaining factors set forth above being regarded as adjuncts (*viśeṣaṇa*). In the case of *prāga-*

A PRIMER OF INDIAN LOGIC [PART III]

bhāvas and *dhvaṁsas* also, to know them definitely would be to cognise them in association with these five factors, the containing correlative or correlated substratum (*anuyogin*) of these two varieties of *abhāva* being the respective inherent cause (*samavāyi-kāraṇa*) and the relation determining their *pratiyogitā* being inherence (*samavāya*). These three *abhāvas*—*prāgabhāva*, *dhvaṁsa* and *atyantābhāva*—are otherwise known as *saṁsargābhāva*, varieties of non-existence, the *pratiyogitā* of which is delimited by some relation other than complete identity (*tādātmya*). Mutual negation or differentiative non-existence (*anyonyābhāva* = *bheda*) amounts to difference; and it is a variety of non-existence, the *pratiyogitā* of which is determined by identity (*tādātmya* = *aikya*). 'A jar is not a cloth' (*ghaṭaḥ paṭo na*)—in propositions like this, difference (*anyonyābhāva* = mutual non-existence) is referred to. In this case, the presence of a jar in a cloth, or of a cloth in a jar, through the relation of complete identity, is denied; or, for all practical purposes, the identity of the two objects referred to is denied. It should be borne in mind that *tādātmya*, in the Nyāya sense, is absolute identity and that *tādātmya*, in the Bhāṭṭa sense, is relative identity or difference-cum-identity.

This variety of *abhāva* is eternal in the case of eternal objects and non-eternal in other cases. Some old Naiyāyikas speak of a certain type of *abhāva* called *sāmayikābhāva*, which, according to them, is a temporary variety of non-existence cognised, for instance, in the place from which a jar is removed for a time and to which it is re-introduced afterwards. But the general sense of the Naiyāyikas is in favour of equating *sāmayikābhāva* with everlasting *atyantābhāva*, which may be cognised for a time and may not be presented in certain forms of thought, owing to the absence of the relation determining the presence of *abhāva* in a certain place. In the case of an *abhāva*, the relation which determines its presence in a certain place, or its being contained (*ādheya*) in a container (*adhikaraṇa*) is known as *vaiśiṣṭya*. This is but a variety of self-linking relation (*svarūpa-sambandha*) and consists in the particular container itself viewed in association with the particular moment at which the counter-correlative in question (*pratiyogin*) is not present on that spot; in other words, the *particular* container, *as such*, constitutes the *vaiśiṣṭya*.

It is noteworthy here that, according to the Naiyāyikas of the older school, total non-existence



is never cognised in the substratum of antecedent or annihilative non-existence. (*Dhvāṃsaprāgabhāvādhikaraṇe atyantābhāvo nāṅgīkriyate*). This is not accepted by the later Naiyāyikas. Some Naiyāyikas hold that the delimiting adjunct of *pratiyogitā*, in the case of an *atyantābhāva*, may be an attribute which never belongs to the particular *pratiyogin*. For instance, in the proposition—‘A jar does not exist as determined by clothness’ (*ghaṭaḥ paṭatvena nāsti*)—jar is the *pratiyogin* and clothness (*paṭatva*) is the *pratiyogitāvachchedakadharmā*. This type of *atyantābhāva* is known as *vyādhikaraṇadharmāvacchinnaṣṭipratyogitākābhāva*—a form of non-existence whose counter-correlativeness is determined by a delimiting adjunct which is never co-existent with what is delimited by it. This form of non-existence is omni-present (*kevalānvayi*) and is co-existent even with its own *pratiyogin*—which is not ordinarily possible. Several later Naiyāyikas reject this view and explain cases like ‘*ghaṭaḥ paṭatvena nāsti*’, by taking the total non-existence of clothness (*paṭatvātyantābhāva*) to be referred to. Advanced students of Advaita would be able to see how the theory of ‘non-existence delimited by an incompatible adjunct’

(*vyadhikaraṇādharmāvacchinnaṣratīyogitākābhāva*) turns out to be a treacherous device which Advaitins could conveniently use in proving the unreality of the world.

There is much divergence among the different schools of Indian philosophy, in this matter. A student of Nyāya should be able to contrast the Nyāya view of *abhāva* with the views of the Bhāṭṭas and Prābhākaras about *abhāva*. Like the Naiyāyikas the Bhāṭṭas also hold that *abhāva* is a distinct category. The latter maintain that every reality has a positive side consisting of positive attributes, and a negative side represented by non-existence (*abhāva*). Thus *abhāva* is an attribute of reality—a *bhāvadharma* or *vastudharma*. According to the Bhāṭṭas, *abhāva* is cognised by a special instrument of cognition, which is called non-cognition (*anupalabdhi*) and which consists in the non-cognition of an object when all the conditions necessary for its cognition are present. In the Bhāṭṭa scheme of *pramāṇas* (instruments of valid cognition), *anupalabdhi* is given the sixth place and it is known as the *ṣaṣṭhāpramāṇa* and it is itself sometimes called *abhāva*. The term *abhāva* used in the sense of *anupalabdhi*, should not be confounded with the *abhāva* which is



the object of this *pramāṇa* (*prameya*). The Naiyāyikas, on the other hand, consider that *abhāva* is known through one or the other, as the case may be, of the *pramāṇas* recognised by them. In fact, of the four *pramāṇas* recognised by them.—viz.: *pratyakṣa* (perception), *anumāna* (inference), *upamāna* (comparison) and *śabda* (verbal testimony)—*abhāva* may come within the scope of the first, second or the fourth, as the case may be. The Naiyāyikas contend that non-cognition, or strictly speaking, effectual non-cognition (*yogyānupalabdhi*), serves as a necessary accessory to *pratyakṣa*, in cognising *abhāva*. In the case of a *samsargābhāva*, it can be perceived only when its *pratiyogin* happens to be perceptible; while in the case of *anyonyābhāva*, it can be perceived when its *anuyogin* is perceptible. For instance, one would be able to perceive the non-existence of a jar on a certain spot, but not the non-existence of air in a place; whereas, one could perceive the difference from ether (*ākāśa-bheda*) in a jar. The Naiyāyikas further explain that the effectuality (*yogyatā*) of non-cognition (*anupalabdhi*) when it helps a *pramāṇa* in cognising *abhāva*, consists in there being no cognition when all the conditions required for it are present.

The Prābhākaras refute the theories that *abhāva* is a distinct category and that *anupalabdhi* is a distinct *pramāṇa*. They contend that the basis of negative propositions is the mere container (*kevalādhikaraṇa*). For instance, in the proposition "Here, on this spot, there is no jar", the only thing which, in fact, is referred to is the empty floor (*kevala-bhūtala*). If *abhāva* should thus be equated with the empty container (*kevalādhikaraṇa*), it might easily be argued from the opposite camp that this is an evasive trick of the Prābhākaras which could be easily seen through and that the concept of the 'emptiness of the container' inevitably presupposes non-existence. The Prābhākaras, however, meet this difficulty by explaining that the phrase 'empty container' is only a description of the form of the cognition underlying negative statements and that *abhāva*, strictly speaking, is the cognition of the container, and of nothing else, in such circumstances as would necessarily lead to the missing object (*pratiyogin*) being cognised, were it present. One of the greatest Prābhākaras—Śālikanātha—describes *abhāva* thus, in the *Prakaraṇapañcikā*:—
 "Abhāva is the cognition of that (container) alone, when the *pratiyogin* (the thing denied in negative

A PRIMER OF INDIAN LOGIC [PART III]

statements) ought to have been perceived were it present" (*dr̥śye pratiyogini yā tadekaviṣayā buddhiḥ sā tadabhāvo vyapadiśyate*). This view shows a clear idealistic leaning. The weak spot in this theory is that it fails to adequately account for the specific reference to *pratiyogin* in negative propositions, since it would be fatal to the Prābhākara view to connect the cognitions underlying them with anything other than the container and it has to be necessarily said that emptiness is not presented as an adjunct in such cognitions.

In order to avoid needless complications and also endless regression in some cases, *abhāvābhāva* is equated by the Naiyāyikas with the corresponding *bhāva* (positive entity), on the ground that a denial of the non-existence of a thing amounts to an affirmation of the corresponding positive entity. Where one *abhāva* is said to be present in another *abhāva*, some Naiyāyikas equate the contained *abhāva* with the other *abhāva* which represents the containing substratum (*adhikaraṇa*). It would be useful to note here that difference from a certain object is reciprocally co-extensive with the absolute negation of the differentia of that object. Difference from a jar (*ghaṭabheda*) is mutually co-extensive



with the absolute non-existence of jarness (*ghaṭa-tvātyantābhāva*).

Abhāva is one of the realities recognised by the Naiyāyikas. In a sense, it might be said that it is the reality of the greatest moment in the pluralistic universe of Nyāya. Final emancipation (*mukti* or *apavarga*) is the highest aim of spiritual life in Nyāya as well as in other systems of Indian philosophy. In Nyāya, *mukti* consists in the annihilation of all evils (*duḥkhas*), the term *duḥkha* in this context comprising everything connected with voluntary activity and leading directly or indirectly to the cycle of death and birth (*pretyabhāva*) and including in this manner every form of pleasure (*sukha*). In the language of Nyāya, *mukti* is *ātyantikaduḥkha-dhvaṁsa*. It would be a mistake to suppose that the Naiyāyikas are pessimists. In fact, no system of Indian philosophy can be said to be pessimistic; for pessimism, in a strict sense, affords no hope or solace, but every system of Indian philosophy aims at the attainment of what it believes to be the highest good and expects its adherents to find comfort in the *summum bonum* it offers to them. One can easily see why Naiyāyikas attach so much importance



A PRIMER OF INDIAN LOGIC [PART III]

to *abhāva*, having due regard to its close relation to the Nyāya conception of *mukti*.

At this stage, it would be useful to consider the Nyāya conception of *sambandha* (relation), with particular reference to the Nyāya theory of difference (*anyonyābhāva*). The Naiyāyikas maintain that relation always presupposes difference and that difference invariably involves total exclusion of identity. According to this view of *sambandha*, it may be said that relation in the Nyāya system is wholly *external*, and in no case *internal*. Bearing this in mind, one cannot easily understand the rationale of the way in which the Nyāya realists bring relations under different categories—contact (*saṁyoga*) being brought under quality (*guṇa*), inherence (*samvāya*) representing a distinct category, and self-relation (*svarūpa-sambandha*) being reducible to the form of one or the other of the seven categories, as the case may be. The Naiyāyikas hold that not only the simples which unite into complex wholes, but the complex wholes also, exist as independent entities and that neither the simples nor the wholes, when they happen to be the relata of some relation, lose their independence. In Western philosophical literature those relations are said to be

A PRIMER OF INDIAN LOGIC [PART III

to *abhāva*, having due regard to its close relation to the Nyāya conception of *mukti*.

At this stage, it would be useful to consider the Nyāya conception of *sambandha* (relation), with particular reference to the Nyāya theory of difference (*anyonyābhāva*). The Naiyāyikas maintain that relation always presupposes difference and that difference invariably involves total exclusion of identity. According to this view of *sambandha*, it may be said that relation in the Nyāya system is wholly *external*, and in no case *internal*. Bearing this in mind, one cannot easily understand the rationale of the way in which the Nyāya realists bring relations under different categories—contact (*saṁyoga*) being brought under quality (*guṇa*), inherence (*saṁvāya*) representing a distinct category, and self-relation (*svarūpa-sambandha*) being reducible to the form of one or the other of the seven categories, as the case may be. The Naiyāyikas hold that not only the simples which unite into complex wholes, but the complex wholes also, exist as independent entities and that neither the simples nor the wholes, when they happen to be the relata of some relation, lose their independence. In Western philosophical literature those relations are said to be

To this question, a Naiyāyika would reply that nothing can be said to be rooted in the nature of a thing, in view of the fact that an attribute (*dharmā*) is wholly different from a qualified thing (*dharmīn*), a composite whole (*avayavin*) is totally different from its component parts (*avayava*), a *jāti* is totally different from *vyakti*, and that, in all cases of relation, the relata, as such are different from each other. Even in cases where complete identity (*aikya* = *īdātmya*) is recognised to serve as relation, though the relation amounts to a negation of difference (*bhedābhāva*), yet there would be no inconsistency in recognising difference between the relata as such; for, where a jar is conceived of as existing in a jar through the relation of identity, what is denied is the difference between a jar and itself, as determined by jariness (*ghaṭatva*), the difference presupposed by the *sambandha*, in that case, having reference to the relata as such—i.e. as determined by relatedness (*sambandhitva*). The opponents of Nyāya realism point out that the conception of relation, which is based upon uncompromising difference incompatible with identity, is unsustainable, inasmuch as the fundamental function of every relation is to unify, in however small a measure it may be, and for



To this question, a Naiyāyika would reply that nothing can be said to be rooted in the nature of a thing, in view of the fact that an attribute (*dharma*) is wholly different from a qualified thing (*dharmin*), a composite whole (*avayavin*) is totally different from its component parts (*avayava*), a *jāti* is totally different from *vyakti*, and that, in all cases of relation, the relata, as such are different from each other. Even in cases where complete identity (*aikya* = *tādātmya*) is recognised to serve as relation, though the relation amounts to a negation of difference (*bhedābhāva*), yet there would be no inconsistency in recognising difference between the relata as such; for, where a jar is conceived of as existing in a jar through the relation of identity, what is denied is the difference between a jar and itself, as determined by jariness (*ghaṭatva*), the difference presupposed by the *sambandha*, in that case, having reference to the relata as such—i.e. as determined by relatedness (*sambandhitva*). The opponents of Nyāya realism point out that the conception of relation, which is based upon uncompromising difference incompatible with identity, is unsustainable, inasmuch as the fundamental function of every relation is to unify, in however small a measure it may be, and for



making it eternal and one and by letting it survive its relata in several cases; and in the very conception of self-relation (*svarūpa-sambandha*), more especially in the conception of complete identity (*abheda*) as a variety of self-relation. These compromises are indeed the weak spots in the walls of the realistic fortress of Nyāya, at which the opponents of Nyāya, like the Bhāṭṭas and Advaitins, find it easy to effect convenient breaches.

4

T—Of them, earth is that which has smell. It is of two kinds—eternal and non-eternal. Its eternal variety consists of atoms. Its non-eternal variety consists of its products. Again, it is of three kinds—the three varieties being the body (*śarīra*), the sense (*indriya*) and other objects (*viṣaya*). The earthen body is the body that belongs to the beings of our class. The

A PRIMER OF INDIAN LOGIC [PART III]

making it eternal and one and by letting it survive its relata in several cases; and in the very conception of self-relation (*svarūpa-sambandha*), more especially in the conception of complete identity (*abheda*) as a variety of self-relation. These compromises are indeed the weak spots in the walls of the realistic fortress of Nyāya, at which the opponents of Nyāya, like the Bhāṭṭas and Advaitins, find it easy to effect convenient breaches.

4

T—Of them, earth is that which has smell. It is of two kinds—eternal and non-eternal. Its eternal variety consists of atoms. Its non-eternal variety consists of its products. Again, it is of three kinds—the three varieties being the body (*śarīra*), the sense (*indriya*) and other objects (*viṣaya*). The earthen body is the body that belongs to the beings of our class. The



CSL

A PRIMER OF INDIAN LOGIC [PART III]

jects made of water are rivers, ocean and such others.

6

T—Fire is that which has hot touch. It is of two kinds—eternal and non-eternal. Its eternal variety consists of atoms. Its non-eternal variety consists of its products. Again, it is of three kinds—the three varieties being the body, the sense, and other objects. The body made of fire is in the world of Sun. The sense made of fire is the visual sense by which one perceives colour; and that sense resides in the foremost part of the dark pupil of the eye. The objects made of fire are of four kinds, the four varieties being the light of the earth, that of the sky, that of



A PRIMER OF INDIAN LOGIC [PART III]

CSL

jects made of water are rivers, ocean and such others.

6

T—Fire is that which has hot touch. It is of two kinds—eternal and non-eternal. Its eternal variety consists of atoms. Its non-eternal variety consists of its products. Again, it is of three kinds—the three varieties being the body, the sense, and other objects. The body made of fire is in the world of Sun. The sense made of fire is the visual sense by which one perceives colour; and that sense resides in the foremost part of the dark pupil of the eye. The objects made of fire are of four kinds, the four varieties being the light of the earth, that of the sky, that of



CSL

70 A PRIMER OF INDIAN LOGIC [PART III]

Wind-God. The sense made of air is the tactus by which one perceives touch; and that sense is found all over the body. The object made of air is the air that shakes trees and such other things. The air that moves about within the body is the vital air, which, though one in itself, is called differently as *prāṇa*, *apāna*—etc., according as its abodes in the body differ.

8

T—Ether is that which has sound as its quality. That is one, all-pervasive and eternal.

In the texts given above, the first five substances are defined and classified. These definitions, with the required amplification, are faultless, according to the requirements of what a Naiyāyika would consider a valid definition. In these five definitions, the relation connecting the respective qualities



CSL

70 A PRIMER OF INDIAN LOGIC [PART IIF

Wind-God. The sense made of air is the tactus by which one perceives touch; and that sense is found all over the body. The object made of air is the air that shakes trees and such other things. The air that moves about within the body is the vital air, which, though one in itself, is called differently as *prāṇa*, *apāna*—etc., according as its abodes in the body differ.

8

T—Ether is that which has sound as its quality. That is one, all-pervasive and eternal.

In the texts given above, the first five substances are defined and classified. These definitions, with the required amplification, are faultless, according to the requirements of what a Naiyāyika would consider a valid definition. In these five definitions, the relation connecting the respective qualities



CSL

A PRIMER OF INDIAN LOGIC [PART III]

a consideration of the atomic hypothesis of the Nyāya-Vaiśeṣika system. This hypothesis is closely connected with the Nyāya-Vaiśeṣika theory of causation and it forms the pivotal part of the Nyāya-Vaiśeṣika cosmogony. Though it had its origin mainly in the speculative thought of Nyāya metaphysics, it exercised a profound influence over many a doctrine of the pluralistic realism of Nyāya and it is in no sense less worthy of consideration than the corresponding atomism which, till recently, swayed scientific thought in the Western world, until it came to be replaced by the theory reducing every atom to a miniature solar system consisting of numerous small electrons gyrating round a sun in the centre. The course of speculative reasoning which led the exponents of the Nyāya-Vaiśeṣika system to formulate the atomic hypothesis should receive due attention here. All visible substances are composite structures consisting of component parts joined together and are large, *i. e.* have the size (*parimāṇa*) called largeness (*mahattva*). Largeness (*mahattva*) and smallness (*anūtvā*) are the two main varieties of size recognised by the Naiyāyikas and they vary between two extreme limits, the highest and the lowest. The highest limit of *mahattva* is



a consideration of the atomic hypothesis of the Nyāya-Vaiśeṣika system. This hypothesis is closely connected with the Nyāya-Vaiśeṣika theory of causation and it forms the pivotal part of the Nyāya-Vaiśeṣika cosmogony. Though it had its origin mainly in the speculative thought of Nyāya metaphysics, it exercised a profound influence over many a doctrine of the pluralistic realism of Nyāya and it is in no sense less worthy of consideration than the corresponding atomism which, till recently, swayed scientific thought in the Western world, until it came to be replaced by the theory reducing every atom to a miniature solar system consisting of numerous small electrons gyrating round a sun in the centre. The course of speculative reasoning which led the exponents of the Nyāya-Vaiśeṣika system to formulate the atomic hypothesis should receive due attention here. All visible substances are composite structures consisting of component parts joined together and are large, *i. e.* have the size (*parimāṇa*) called largeness (*mahattva*). Largeness (*mahattva*) and smallness (*aṇutva*) are the two main varieties of size recognised by the Naiyāyikas and they vary between two extreme limits, the highest and the lowest. The highest limit of *mahattva* is



made up of parts (*sāvayava*). An endless assumption of parts would involve the defect of endless regression (*anavasthā*), which is generally regarded in Indian philosophy as a fatal objection to the recognition of causal relation or to explanation. It would therefore, be necessary that the process of division should stop at some point and the point at which it stops is the last conceivable part (*avayava*). It would be most reasonable to recognise that as the last conceivable part, beyond which no kind of argument constrains us to recognise further parts. Beyond the parts constituting the component elements of the smallest visible motes, there is no necessity to recognise further parts, the reason constraining the recognition of parts in the smallest visible substances being that the latter are visible and, likewise, the recognition of parts in the constituents of the smallest visible substances being that those constituents cause a composite whole which is large (*mahādārambhaka*), and there being no such compelling reason in the case of the component parts of such constituents, since those parts are neither visible nor members of a large substance. The whole argument is usually stated thus in the form of two syllogisms in Sanskrit:—

A PRIMER OF INDIAN LOGIC [PART III]

made up of parts (*sāvayava*). An endless assumption of parts would involve the defect of endless regression (*anavasthā*), which is generally regarded in Indian philosophy as a fatal objection to the recognition of causal relation or to explanation. It would therefore, be necessary that the process of division should stop at some point and the point at which it stops is the last conceivable part (*avayava*). It would be most reasonable to recognise that as the last conceivable part, beyond which no kind of argument constrains us to recognise further parts. Beyond the parts constituting the component elements of the smallest visible motes, there is no necessity to recognise further parts, the reason constraining the recognition of parts in the smallest visible substances being that the latter are visible and, likewise, the recognition of parts in the constituents of the smallest visible substances being that those constituents cause a composite whole which is large (*mahadārambhaka*), and there being no such compelling reason in the case of the component parts of such constituents, since those parts are neither visible nor members of a large substance. The whole argument is usually stated thus in the form of two syllogisms in Sanskrit:—



atoms (*paramāṇus*). It is now apparent why each component element of a *truṭi* is called a dyad (*dvyanuka* = a binary product of atoms). For obvious reasons the component elements of a *truṭi* itself cannot be less than two; and they are taken to be *three* in the Nyāya-Vaiśeṣika system. In other words, a *truṭi* or *trasareṇu* is made up of three dyads (*dvyanuka*). For this reason, it is also called *tryanuka*. The reason why the number of parts in a *truṭi* is fixed at *three* requires explanation. In our experience, we see that the size (*parimāṇa*) of the parts gives rise invariably to an increased size of the same kind in the composite whole and that this increase is only an increase in degree. Our observation is restricted to substances having *mahattva* (largeness). This observation leads to the generalisation that, if a size, should serve as the non-intimate cause (*asamavāyikāraṇa*) of another size, both of them, the size that causes and the size that is caused, belong to the same variety of size, and the size that is caused represents a higher type of the same variety, as compared with the size that causes. (*Parimāṇānāṁ svasajātīyasvotkr̥ṣṭaparimāṇārambhakatvaniyamah*). A strict application of this rule to *anutva* would make it clear that, if the *anutva*

atoms (paramāṇus). It is now apparent why each component element of a *truṭi* is called a dyad (*dvyāṇuka* = a binary product of atoms). For obvious reasons the component elements of a *truṭi* itself cannot be less than two; and they are taken to be *three* in the Nyāya-Vaiśeṣika system. In other words, a *truṭi* or *trasareṇu* is made up of three dyads (*dvyāṇuka*). For this reason, it is also called *tryaṇuka*. The reason why the number of parts in a *truṭi* is fixed at *three* requires explanation. In our experience, we see that the size (*parimāṇa*) of the parts gives rise invariably to an increased size of the same kind in the composite whole and that this increase is only an increase in degree. Our observation is restricted to substances having *mahattva* (largeness). This observation leads to the generalisation that, if a size, should serve as the non-intimate cause (*asamavāyikāraṇa*) of another size, both of them, the size that causes and the size that is caused, belong to the same variety of size, and the size that is caused represents a higher type of the same variety, as compared with the size that causes. (*Parimāṇānāṁ svasajātīyasvotkr̥ṣṭaparimāṇārambhakatvaniyamah*). A strict application of this rule to *anūtvā* would make it clear that, if the *anūtvā*



hold that, in the atomic theory, there is clear justification for some restriction regarding the nature and number of the component parts in the case of dyads and triads and there is no necessity for recognising any such restriction in the case of composite products (*avayavins*) beyond the stage of triads. It is maintained that the parts of a triad (*tryaṇuka*) are composite structures (*sāvayava*), and they cannot be less than three and need not be more than three and therefore must be *three* in number. The constituent elements of the composite products beyond the stage of triads may be four dyads or five dyads and so on, or four triads or five triads and so on, according to the varying circumstances in each case.

It should also be borne in mind that atoms and dyads are never presented in normal perception and that they are capable of combining with each other. In the atomic theory of the Nyāya-Vaiśeṣika system, it is assumed that the fiat of the omnipotent God, in conjunction with the inevitable vestiges of the works done by embodied souls (*jīvāḥ*), causes *concretive* activities of various kinds in various atoms; and as a result of such activities, they come into contact with each other and composite products in the shape of dyads, triads, and so on, arise. Thus creation



A PRIMER OF INDIAN LOGIC [PART III]

hold that, in the atomic theory, there is clear justification for some restriction regarding the nature and number of the component parts in the case of dyads and triads and there is no necessity for recognising any such restriction in the case of composite products (*avayavins*) beyond the stage of triads. It is maintained that the parts of a triad (*tryaṇuka*) are composite structures (*sāvayava*), and they cannot be less than three and need not be more than three and therefore must be *three* in number. The constituent elements of the composite products beyond the stage of triads may be four dyads or five dyads and so on, or four triads or five triads and so on, according to the varying circumstances in each case.

It should also be borne in mind that atoms and dyads are never presented in normal perception and that they are capable of combining with each other. In the atomic theory of the Nyāya-Vaiśeṣika system, it is assumed that the fiat of the omnipotent God, in conjunction with the inevitable vestiges of the works done by embodied souls (*jīvāḥ*), causes *concretive* activities of various kinds in various atoms; and as a result of such activities, they come into contact with each other and composite products in the shape of dyads, triads, and so on, arise. Thus creation



Where, however, the size of the composite product is regarded as resulting from the number of its component parts, one may very well stop with the members of the smallest visible substance and take these members to be two in number. The arguments of *anavasthā* and *lāghava*, if pushed a bit further, would knock off dyads and atoms and would lead to the smallest visible substances themselves being regarded as the indivisible ultimates of composite matter. Further, how can atoms come together? How can contact (*saṁyoga*) arise between two atoms? In our experience, contact (*saṁyoga*) is possible ordinarily between two composite substances (*sāvayava*) or, in some cases, between one composite substance and another all-pervasive substance (*vibhūdravya*). Contact is by its very nature spatially non-pervasive (*avyāpyavṛtti*) ; if it is present in one part of a thing it is missing in another part of the same thing ; and it can never be said to completely pervade its relata. Such being the case, it is hardly conceivable how an indivisible atom can come into contact with another atom. These are the more important defects in the atomic theory and pointed out by anti-creationistic philosophers like the Advaitins, the Sāṁkhyas and the Mīmāṃsakas.

A PRIMER OF INDIAN LOGIC [PART III]

Where, however, the size of the composite product is regarded as resulting from the number of its component parts, one may very well stop with the members of the smallest visible substance and take these members to be two in number. The arguments of *anavasthā* and *lāghava*, if pushed a bit further, would knock off dyads and atoms and would lead to the smallest visible substances themselves being regarded as the indivisible ultimates of composite matter. Further, how can atoms come together? How can contact (*saṃyoga*) arise between two atoms? In our experience, contact (*saṃyoga*) is possible ordinarily between two composite substances (*sāvayava*) or, in some cases, between one composite substance and another all-pervasive substance (*vibhūdravya*). Contact is by its very nature spatially non-pervasive (*avyāpyavṛtti*); if it is present in one part of a thing it is missing in another part of the same thing; and it can never be said to completely pervade its relata. Such being the case, it is hardly conceivable how an indivisible atom can come into contact with another atom. These are the more important defects in the atomic theory and pointed out by anti-creationistic philosophers like the Advaitins, the Sāṃkhyas and the Mīmāṃsakas.



according to the Nyāya theory is the result of the deliberate design of the omnipotent and omniscient God; while atoms in the Greek theory are wholly subject to chance drifts and aggregations of various types. Professor Keith and those who agree with him are at liberty to think that these divergences, however fundamental they may be, need not be taken to shut out all possibility of Greek influence. It must, however, be remembered that any suspicion of Greek influence has to rest almost entirely on the slender basis of temporal proximity or synchronism and that even this flimsy ground is shattered by the evidences in the early philosophical literature of India in favour of the view that atomic theory might have gained currency in India, in some form, perhaps long before the age of Kaṇāda and Gautama.

The first three of the five elements (*bhūta*)—earth, water and fire—are defined through their characteristic qualities; and the fourth element, air, is defined through the quality of touch in association with the negative adjunct of colourlessness (*rūpā-bhāva*). The eternal varieties are represented by the atoms whose nature is described above. In the textual sections relating to earth, water, fire and air,



82 according to the Nyāya theory is the result of the deliberate design of the omnipotent and omniscient God; while atoms in the Greek theory are wholly subject to chance drifts and aggregations of various types. Professor Keith and those who agree with him are at liberty to think that these divergences, however fundamental they may be, need not be taken to shut out all possibility of Greek influence. It must, however, be remembered that any suspicion of Greek influence has to rest almost entirely on the slender basis of temporal proximity or synchronism and that even this flimsy ground is shattered by the evidences in the early philosophical literature of India in favour of the view that atomic theory might have gained currency in India, in some form, perhaps long before the age of Kaṇāda and Gautama.

The first three of the five elements (*bhūta*)—earth, water and fire—are defined through their characteristic qualities; and the fourth element, air, is defined through the quality of touch in association with the negative adjunct of colourlessness (*rūpābhāva*). The eternal varieties are represented by the atoms whose nature is described above. In the textual sections relating to earth, water, fire and air,

A PRIMER OF INDIAN LOGIC [PART III]

contact with *manas* as causes a cognition, there being in it no special quality which shows (*udbhūta-viśeṣaḥ*), except sound (*śabda*). The Sanskrit definition of a sense-organ runs thus:—“*Śabdeta-rodbhūtaviśeṣaḥ* *gūṇānāśrayatve sati jñānakāraṇa-manassamīyogāśrayatvam indriyatvam*.” It may be noted here that perceptible qualities like colour, touch etc. may be present in a substance either in a condition in which it shows (*udbhūtāvasthā*) or in a sub-perceptual condition in which it does not show (*anudbhūtāvasthā*). Colour in the former condition, for instance, is visible and actually visualised when all the circumstances necessary for visual perception are present and it is present in all visible substances; while, colour in a sub-perceptual condition, (*anudbhūtāvasthā*), though not inherently invisible, is never actually visualised. The term *viśaya* in the threefold classification of earth, water, fire and air turns to be somewhat misleading in the case of some people. Professor Keith, for instance, takes this term to mean ‘an object of sense-perception’ and accuses Annambhaṭṭa of inadvertence for having brought atoms under *viśaya*. It will be seen that there is no inadvertence on the part of Annambhaṭṭa though some of his readers may lose sight of certain

A PRIMER OF INDIAN LOGIC [PART III

contact with *manas* as causes a cognition, there being in it no special quality which shows (*udbhūta-viśeṣaḥ*), except sound (*śabda*). The Sanskrit definition of a sense-organ runs thus :—“*Śabdeta-rodbhūtaviśeṣaḥ jñānāśrayatve sati jñānakāraṇa-manassamīyogāśrayatvam indriyatvam.*” It may be noted here that perceptible qualities like colour, touch etc. may be present in a substance either in a condition in which it shows (*udbhūtāvasthā*) or in a sub-perceptual condition in which it does not show (*anudbhūtāvasthā*). Colour in the former condition, for instance, is visible and actually visualised when all the circumstances necessary for visual perception are present and it is present in all visible substances; while, colour in a sub-perceptual condition, (*anudbhūtāvasthā*), though not inherently invisible, is never actually visualised. The term *viśaya* in the threefold classification of earth, water, fire and air turns to be somewhat misleading in the case of some people. Professor Keith, for instance, takes this term to mean ‘an object of sense-perception’ and accuses Annambhaṭṭa of inadvertence for having brought atoms under *viśaya*. It will be seen that there is no inadvertence on the part of Annambhaṭṭa though some of his readers may lose sight of certain



A PRIMER OF INDIAN LOGIC [PART III]

In the textual section dealing with fire (*tejas*), gold and such other valuable metals are said to come under the mine-born (*ākaraṇa*) variety of fire. Through speculative reasoning, the Naiyāyikas seek to maintain that gold is light. The yellow metal that we see and handle has some weight. Yellow colour belongs to earth and weightiness to earth and water. So, the metal which has these two properties—yellow colour and weightiness should be taken to be a variety of earth. However, the yellow and weighty substance that we see and handle and commonly regard as gold cannot all be earth; for, however much you may heat it, it does not completely lose its fluidity (*dravatva*) and any variety of earth, which preserves its fluidity under heat, does so only when it is associated with a substance which is not earth and has fluidity and is capable of counteracting the effect of heat on fluidity. This may be seen in certain varieties of earth, like ghee, placed in water. Thus the yellow substance referred to, though it is itself a variety of earth, should be taken to preserve its fluidity for the reason that it is associated with some other substance which is not earth and has fluidity and counteracts the destruction of fluidity by heat. The latter substance which coun-



In the textual section dealing with fire (*tejas*), gold and such other valuable metals are said to come under the mine-born (*ākaraja*) variety of fire. Through speculative reasoning, the Naiyāyikas seek to maintain that gold is light. The yellow metal that we see and handle has some weight. Yellow colour belongs to earth and weightiness to earth and water. So, the metal which has these two properties—yellow colour and weightiness should be taken to be a variety of earth. However, the yellow and weighty substance that we see and handle and commonly regard as gold cannot all be earth; for, however much you may heat it, it does not completely lose its fluidity (*dravatva*) and any variety of earth, which preserves its fluidity under heat, does so only when it is associated with a substance which is not earth and has fluidity and is capable of counteracting the effect of heat on fluidity. This may be seen in certain varieties of earth, like ghee, placed in water. Thus the yellow substance referred to, though it is itself a variety of earth, should be taken to preserve its fluidity for the reason that it is associated with some other substance which is not earth and has fluidity and counteracts the destruction of fluidity by heat. The latter substance which coun-

The senses of sight, taste, smell and touch are respectively constituted by light (*tejas*), water (*jala*), earth (*pr̥thivī*) and air (*vāyu*). They are all large enough (*mahat*) the senses of sight, taste and smell (*cakṣus*, *rasana* and *ghrāṇa*) being triads of the respective elements (*bhūta*) and the sense of touch (*tvak*) spreading all over the body. Though they are large enough, they fall outside the range of external sense-perception, for the reason that their qualities are sub-perceptual (*anudbhūta*), or to be more accurate, for the reason that they are not associated with perceptible colour (*udbhūtarūpa*).

Ether (*Ākāśa*) is inferred as the eternal and all-pervasive substratum in which sound inheres. According to the Sāṃkhyas and Advaitins, it is an element produced and destroyed in the same way as other elements. In Nyāya, the sense of hearing is represented by ether delimited by the orifice of the ear. Ether is all-pervasive (*vibhu*) in the sense that it comes into contact with all the (*mūrta*) movable substances of finite size (*paricchinna-parimāṇa*). An all-pervasive substance does not admit of any movement and is one and eternal, divisibility and non-eternity being incompatible with all-pervasiveness. The sense of hearing is



88 A PRIMER OF INDIAN LOGIC [PART III]

The senses of sight, taste, smell and touch are respectively constituted by light (*tejas*), water (*jala*), earth (*pr̥thivī*) and air (*vāyu*). They are all large enough (*mahat*) the senses of sight, taste and smell (*cakṣus*, *rasana* and *ghrāṇa*) being triads of the respective elements (*bhūta*) and the sense of touch (*tvak*) spreading all over the body. Though they are large enough, they fall outside the range of external sense-perception, for the reason that their qualities are sub-perceptual (*anudbhūta*), or to be more accurate, for the reason that they are not associated with perceptible colour (*udbhūtarūpa*).

Ether (*Ākāśa*) is inferred as the eternal and all-pervasive substratum in which sound inheres. According to the Sāṃkhyas and Advaitins, it is an element produced and destroyed in the same way as other elements. In Nyāya, the sense of hearing is represented by ether delimited by the orifice of the ear. Ether is all-pervasive (*vibhu*) in the sense that it comes into contact with all the (*mūrta*) movable substances of finite size (*paricchinna-parimāṇa*). An all-pervasive substance does not admit of any movement and is one and eternal, divisibility and non-eternity being incompatible with all-pervasiveness. The sense of hearing is



realities exactly corresponding to the elements constituting the subjective form of every valid experience (*anubhava*) and that propositions and expressions recognised to be correct should be relied upon as the unmistakable indexes of the forms of experience which they are intended to express. The Naiyāyikas argue that events are referred to as past, present or future, anterior or posterior, simultaneous or occurring in succession, slow or quick, and that such references cannot be accounted for except by the hypothesis that there is a distinct substance (*dravya*) known as *kāla* (time). 'Now the jar is' (*idānīm ghataḥ*)—such propositions are understood by the Naiyāyikas as referring to some relation between the jar and the sun's motion, on the basis of the old-world astronomical theory that the sun moves on the sky without ever coming to rest. The Naiyāyikas believe that the sun's motion can be ascertained through perception as well as inference. The common-sense view of men connects the concept of *now* (*idānīm*) with the sun's motion (*sūrya-parispanda*), brought into relation with the thing denoted by the word collocated with *idānīm* in expressions like '*idānīm ghataḥ*'. The sun's motion is directly related only with the sun, such



CSL

A PRIMER OF INDIAN LOGIC [PART III]

realities exactly corresponding to the elements constituting the subjective form of every valid experience (*anubhava*) and that propositions and expressions recognised to be correct should be relied upon as the unmistakable indexes of the forms of experience which they are intended to express. The Naiyāyikas argue that events are referred to as past, present or future, anterior or posterior, simultaneous or occurring in succession, slow or quick, and that such references cannot be accounted for except by the hypothesis that there is a distinct substance (*dravya*) known as *kāla* (time). 'Now the jar is' (*idānīm ghataḥ*)—such propositions are understood by the Naiyāyikas as referring to some relation between the jar and the sun's motion, on the basis of the old-world astronomical theory that the sun moves on the sky without ever coming to rest. The Naiyāyikas believe that the sun's motion can be ascertained through perception as well as inference. The common-sense view of men connects the concept of *now* (*idānīm*) with the sun's motion (*sūrya-pariṣpanda*), brought into relation with the thing denoted by the word collocated with *idānīm* in expressions like '*idānīm ghataḥ*'. The sun's motion is directly related only with the sun, such



How are we to know that this intermediate substance, that bridges over the gulf between the sun and a jar, is one, eternal and all-pervasive and does not come under any of the other substances? It is presented in every experience or expression, explicitly or implicitly, as substratum of other objects; it is not perceptible, nor has it the qualities of colour, touch and sound; so, it must be different from the five *bhūtas*; it would be reasonable to suppose that it is of infinite magnitude (*paramamahattva*), since it is taken to be one and eternal for the sake of economy (*lāghava*); and in view of the distinct cognitions we have of the past, present and future, as compared with the east, west, north and south, we should take time (*kāla*) to be different from space (*dik*). In a similar manner, space (*dik*) is also inferred by the Naiyāyikas as the substratum of the contact which serves as the non-inherent (*asamavāyī*) cause of spatial proximity and distance (*aṇatva* and *paratva*), referred to in statements like 'This lies farther', 'This lies near'. Both time and space (*kāla* and *dik*) are imperceptible according to the Naiyāyikas and are all-pervading substances in which all the things in the Universe may be said to be present through the self-relation of time or



92 A PRIMER OF INDIAN LOGIC [PART III

How are we to know that this intermediate substance, that bridges over the gulf between the sun and a jar, is one, eternal and all-pervasive and does not come under any of the other substances? It is presented in every experience or expression, explicitly or implicitly, as substratum of other objects; it is not perceptible, nor has it the qualities of colour, touch and sound; so, it must be different from the five *bhūtas*; it would be reasonable to suppose that it is of infinite magnitude (*paramamahattva*), since it is taken to be one and eternal for the sake of economy (*lāghava*); and in view of the distinct cognitions we have of the past, present and future, as compared with the east, west, north and south, we should take time (*kāla*) to be different from space (*dik*). In a similar manner, space (*dik*) is also inferred by the Naiyāyikas as the substratum of the contact which serves as the non-inherent (*asamavāyī*) cause of spatial proximity and distance (*aparātva* and *parātva*), referred to in statements like 'This lies farther', 'This lies near'. Both time and space (*kāla* and *dik*) are imperceptible according to the Naiyāyikas and are all-pervading substances in which all the things in the Universe may be said to be present through the self-relation of time or

according to them. The Buddhist idealists regard time and space as merely forms of momentary and fleeting consciousness (*viññāna*). The Advaitic monists look upon time and space as phenomenal appearances super-imposed upon the absolute *Brahman*, which is the only reality transcending them. The Sāṃkhyas would bring both time and space under the elemental evolute (*bhūta*) called *ākāśa*. Modern Naiyāyikas like *Raghunātha Śiromaṇi* bring time and space under God (*Īśvara*) and regard them as phases of the omnipotent and omnipresent Lord. In Chapter II, āhnika I, sūtras 40 to 44, of the *Nyāyasūtrabhāṣya*, Gautama and Vātsyāyana elucidate the conceptions of the present, past and future. Vātsyāyana points out that time is presented in our experience mainly through the help of motion and not through association with distance. The *Bhāṣyakāra* observes under II—I—41,—
“Nādhvavyaṅgyaḥ kālaḥ, kim tarhi kriyāvyāṅgyaḥ”.
 A *kriyā*, as understood by Vātsyāyana in this context, is not a single activity but a series of activities. The conception of a *kriyā* or *karma*, even in its strict sense, is inseparably bound up with the conception of duration, every *kriyā* lasting for four *kṣaṇas* (moments) as already explained in page 20, part III,

according to them. The Buddhist idealists regard time and space as merely forms of momentary and fleeting consciousness (*viññāna*). The Advaitic monists look upon time and space as phenomenal appearances super-imposed upon the absolute *Brahman*, which is the only reality transcending them. The Sāṃkhyas would bring both time and space under the elemental evolute (*bhūta*) called *ākāśa*. Modern Naiyāyikas like *Raghunātha Śiromaṇi* bring time and space under God (*Īśvara*) and regard them as phases of the omnipotent and omnipresent Lord. In Chapter II, āhnika I, sūtras 40 to 44, of the *Nyāyasūtrabhāṣya*, Gautama and Vātsyāyana elucidate the conceptions of the present, past and future. Vātsyāyana points out that time is presented in our experience mainly through the help of motion and not through association with distance. The Bhāṣyakāra observes under II—I—41,—
“Nādhvavyaṅgyaḥ kālaḥ, kim tarhi kriyāvyaṅgyaḥ”.
 A *kriyā*, as understood by Vātsyāyana in this context, is not a single activity but a series of activities. The conception of a *kriyā* or *karma*, even in its strict sense, is inseparably bound up with the conception of duration, every *kriyā* lasting for four *kṣaṇas* (moments) as already explained in page 20, part III,



CSL

pleasure and such other (perceptible qualities of the soul) are directly apprehended. There are innumerable minds (*manāmsi*), since they are specifically linked up with each soul and they are atomic and eternal.

Ātman (soul) is the substratum in which knowledge inheres. This definition is quite adequate to indicate that the *soul* is a substance (*dravya*) and to differentiate it from other substances. One's own *soul* or *self* is, according to Nyāya, revealed in one's inner perceptual experience arising through the inner sense of mind, independently of the external senses, *i. e.*:—in one's *mānasa-pratyakṣa* which takes the forms—'I know,' 'I will', 'I feel', 'I wish' ('*aḥam jānāmi*,' '*aḥam yate*,' '*aḥam sukhī*,' '*aḥam icchāmi*'). It should be noted that, even in such inner experiences, it is never presented by itself, but it is presented only as the substratum of knowledge or consciousness (*jñāna*), volitional effort (*kṛti*=*yatna*), pleasure and pain (*sukha*, *duḥkha*) and desire (*icchā*). For this reason, the Naiyāyikas hold that one's own soul or self is



CSL

A PRIMER OF INDIAN LOGIC [PART III]

pleasure and such other (perceptible qualities of the soul) are directly apprehended. There are innumerable minds (*manāṁsi*), since they are specifically linked up with each soul and they are atomic and eternal.

Ātman (soul) is the substratum in which knowledge inheres. This definition is quite adequate to indicate that the *soul* is a substance (*dravya*) and to differentiate it from other substances. One's own *soul* or *self* is, according to Nyāya, revealed in one's inner perceptual experience arising through the inner sense of mind, independently of the external senses, *i. e.*:—in one's *mānasa-pratyakṣa* which takes the forms—'I know,' 'I will', 'I feel', 'I wish' ('*aḥam jānāmi*,' '*aḥam yate*,' '*aḥam sukhī*,' '*aḥam icchāmi*'). It should be noted that, even in such inner experiences, it is never presented by itself, but it is presented only as the substratum of knowledge or consciousness (*jñāna*), volitional effort (*kṛti*=*yatna*), pleasure and pain (*sukha*, *duḥkha*) and desire (*icchā*). For this reason, the Naiyāyikas hold that one's own soul or self is



when he observes that, though *ātman* is directly perceived by the *manas*, as *agent* or *owner*, through association with the body and senses with which he came to be invested as a result of his own deeds, yet imperceptibility (*apratyakṣatva*) happens to be predicated with reference to *ātman*, merely in view of the soul falling outside the range of the external senses. The leading exponents of the Nyāya-Vaiśeṣika system are, however, agreed that one person's soul cannot be perceived by the *manas* of another person and that, even in the case of one's own soul, mental perception (*mānasapratyakṣa*) is misleading since it often lumps up *ātman* and body into one jumble. For this reason, in order to prove the existence of *soul* as a distinct entity and to differentiate it from the body, the senses, the vital airs and such other things, it would be necessary to resort to inference. Two typical arguments adduced by the Vaiśeṣikas and Naiyāyikas in this connection are worthy of consideration. From the movement of a chariot, one ordinarily infers the presence of a charioteer who drives it; even so, one infers an individual soul who *drives* a body, from its various activities. Knowledge and such other qualities, normally perceived only by the inner sense



when he observes that, though *ātman* is directly perceived by the *manas*, as *agent* or *owner*, through association with the body and senses with which he came to be invested as a result of his own deeds, yet imperceptibility (*apratyakṣatva*) happens to be predicated with reference to *ātman*, merely in view of the soul falling outside the range of the external senses. The leading exponents of the Nyāya-Vaiśeṣika system are, however, agreed that one person's soul cannot be perceived by the *manas* of another person and that, even in the case of one's own soul, mental perception (*mānasapratyakṣa*) is misleading since it often lumps up *ātman* and body into one jumble. For this reason, in order to prove the existence of *soul* as a distinct entity and to differentiate it from the body, the senses, the vital airs and such other things, it would be necessary to resort to inference. Two typical arguments adduced by the Vaiśeṣikas and Naiyāyikas in this connection are worthy of consideration. From the movement of a chariot, one ordinarily infers the presence of a charioteer who drives it; even so, one infers an individual soul who *drives* a body, from its various activities. Knowledge and such other qualities, normally perceived only by the inner sense



CSL

100 A PRIMER OF INDIAN LOGIC [PART III]

(*madhyama-parimāṇa*); for, anything which has the size called *mahattva* (largeness) and which is not all-pervasive (*vibhu*), is non-eternal and therefore comes to an end; but *ātman* cannot come to an end as already explained. On these grounds, the Nyāya-Vaiśeṣika system maintains that there are innumerable souls and every *ātman* is eternal (*nitya*) and all-pervasive (*vibhu*). Though the soul is present everywhere, consciousness and other special qualities attributed to it are produced within the sphere delimited by body (*śarīra*); and this is the reason why body is described as the field of *ātman*'s experience—(*ātmāno bhogāyatanam śarīram*).

According to Nyāya, *ātman* is of two kinds—the individual soul (*jīva*) and the supreme Soul (*paramātmān*). Fourteen qualities are ascribed to the former—*viz.*:—number, size, contact, disjunction, separateness, cognition, pleasure, pain, desire, dislike, volitional effort, merit, demerit and reminiscent impressions; and eight qualities are ascribed to the latter—*viz.*: number, size, contact, disjunction, separateness, cognition, desire, and volitional effort. The Naiyāyikas accept the supreme authority and infallibility of revealed texts (*śruti*) and recognise, on the authority of those texts, the existence of



100 A PRIMER OF INDIAN LOGIC [PART III

(*madhyamaṣarimāṇa*); for, anything which has the size called *mahattva* (largeness) and which is not all-pervasive (*vibhu*), is non-eternal and therefore comes to an end; but *ātman* cannot come to an end as already explained. On these grounds, the Nyāya-Vaiśeṣika system maintains that there are innumerable souls and every *ātman* is eternal (*nitya*) and all-pervasive (*vibhu*). Though the soul is present everywhere, consciousness and other special qualities attributed to it are produced within the sphere delimited by body (*śarīra*); and this is the reason why body is described as the field of *ātman*'s experience—(*ātmano bhogāyatanam śarīram*).

According to Nyāya, *ātman* is of two kinds—the individual soul (*jīva*) and the supreme Soul (*paramātmān*). Fourteen qualities are ascribed to the former—*viz.*:—number, size, contact, disjunction, separateness, cognition, pleasure, pain, desire, dislike, volitional effort, merit, demerit and reminiscent impressions; and eight qualities are ascribed to the latter—*viz.*: number, size, contact, disjunction, separateness, cognition, desire, and volitional effort. The Naiyāyikas accept the supreme authority and infallibility of revealed texts (*śruti*) and recognise, on the authority of those texts, the existence of



CSL

A PRIMER OF INDIAN LOGIC [PART III]

should be *Īśvara*. The various planets are sustained in their position and do not sink down or dash against each other; this should be due to the sustaining effort (*dhṛti*) of some conscious being, who is *Īśvara*. The intelligent being, who is originally responsible for the first introduction (*pada*) into the world of certain indispensable crafts and arts like weaving and pot-making, cannot be a *jīva* and should be taken to be *Īśvara*. The infallibility of the Vedas depends on the unfailing validity of the knowledge derived from them; that knowledge is always valid on account of the eternal purity of the source from which the Vedas originated; and that source is the omniscient God. The vedic texts consisting of sentences should have been composed by some intelligent author; and that author of supreme intelligence is the omniscient God. The number 'two' (*dvitvasamkhyā*), belonging to two atoms, is the cause of the size of dyads (*dvyaṇuka*); two and the higher numbers are all products resulting from the enumerative cognition (*apekṣābuddhi*) of the person who counts; and at the beginning of creation, such enumerative cognition could be attributed only to the omniscient God and to none else. All these eight arguments are summed up by



CSL

102 A PRIMER OF INDIAN LOGIC [PART III]

should be *Īśvara*. The various planets are sustained in their position and do not sink down or dash against each other; this should be due to the sustaining effort (*dhṛti*) of some conscious being, who is *Īśvara*. The intelligent being, who is originally responsible for the first introduction (*pada*) into the world of certain indispensable crafts and arts like weaving and pot-making, cannot be a *jīva* and should be taken to be *Īśvara*. The infallibility of the Vēdas depends on the unfailing validity of the knowledge derived from them; that knowledge is always valid on account of the eternal purity of the source from which the Vēdas originated; and that source is the omniscient God. The vedic texts consisting of sentences should have been composed by some intelligent author; and that author of supreme intelligence is the omniscient God. The number 'two' (*dvitvasamkhyā*), belonging to two atoms, is the cause of the size of dyads (*dvyaṇuka*); two and the higher numbers are all products resulting from the enumerative cognition (*apekṣābuddhi*) of the person who counts; and at the beginning of creation, such enumerative cognition could be attributed only to the omniscient God and to none else. All these eight arguments are summed up by



pervasive, is embodied. The Prābhākara school also recognises different, eternal and all-pervasive souls in different bodies; and the soul, however, is not the object of mental perception (*mānasapratyakṣa*), according to their system. Expressions like 'I cognise myself' (*mām jānāmi*) are understood to refer to *ātman*, not as the object (*karma*) of cognition, but merely as coming within the scope of cognition. The Prābhākara school holds that in every cognition, three factors are invariably presented—*viz.*, the object (*viśaya*), the soul as knower or the substratum of cognition (*jñātā*), and the cognition itself (*jñāna-svarūpa*). The followers of Śrī Rāmānuja and certain other Vaiṣṇavas hold that the individual soul (*jīva*) is different in different bodies and is atomic in size (*aṇu-parimāṇa*). The Bauddha idealists would not recognise a permanent soul and would reduce it to momentary consciousness (*kṣaṇikavijñāna*); while the Jaina realists would make the soul commensurate with the body. The Advaitic monists hold that the individual soul (*jīva*), which appears to vary in association with mind (*antaḥkaraṇa*) and to partake of the latter's vicissitudes, is in fact identical with the immutable and absolute reality called *Brahman*.

pervasive, is embodied. The Prābhākara school also recognise different, eternal and all-pervasive souls in different bodies; and the soul, however, is not the object of mental perception (*mānasapratyakṣa*), according to their system. Expressions like 'I cognise myself' (*mām jānāmi*) are understood to refer to *ātman*, not as the object (*karma*) of cognition, but merely as coming within the scope of cognition. The Prābhākara school holds that in every cognition, three factors are invariably presented—*viz.*, the object (*viśaya*), the soul as knower or the substratum of cognition (*jñātā*), and the cognition itself (*jñāna-svarūpa*). The followers of Śrī Rāmānuja and certain other Vaiṣṇavas hold that the individual soul (*jīva*) is different in different bodies and is atomic in size (*aṇuparimāṇa*). The Bauddha idealists would not recognise a permanent soul and would reduce it to momentary consciousness (*kṣaṇikavijñāna*); while the Jaina realists would make the soul commensurate with the body. The Advaitic monists hold that the individual soul (*jīva*), which appears to vary in association with mind (*antaḥkaraṇa*) and to partake of the latter's vicissitudes, is in fact identical with the immutable and absolute reality called *Brahman*.

parimāṇam manah). The Nyāya-Vaiśeṣika system ascribes eight qualities to *manas*—number, atomic size, separateness, contact, disjunction, remoteness, proximity and rapidity. The Prābhākara agree with the Naiyāyikas in the view that *manas* is an eternal atomic substance, but would not accept the view that *ātman* is the object of mental perception (*mānasapratyakṣa*). The Bhāṭṭas maintain that *manas* is all-pervasive and is in eternal contact with the all-pervasive *ātman*; that *ātman* and *manas*, in contact with each other, function only within the sphere of the body (*śarīra*) with which they happen to be associated; and that our experience is inconclusive and cannot be said to be such as would rule out the possibility of several cognitions arising at the same time. The Advaitins regard *antaḥkāraṇa* or the inner instrument of knowledge as a substance constituted by light (*tejas*) and maintain that it is not a sense (*indriya*) in the strict sense of the term and that its modifications (*vṛttayah*) may assume a cognitive, volitional or emotional form according as circumstances vary.

The unswerving fidelity of the Naiyāyikas to realism in a strict sense is mainly responsible for the



parimāṇam manah). The Nyāya-Vaiśeṣika system ascribes eight qualities to *manas*—number, atomic size, separateness, contact, disjunction, remoteness, proximity and rapidity. The Prābhākara agree with the Naiyāyikas in the view that *manas* is an eternal atomic substance, but would not accept the view that *ātman* is the object of mental perception (*mānasapratyakṣa*). The Bhāṭṭas maintain that *manas* is all-pervasive and is in eternal contact with the all-pervasive *ātman*; that *ātman* and *manas*, in contact with each other, function only within the sphere of the body (*śarīra*) with which they happen to be associated; and that our experience is inconclusive and cannot be said to be such as would rule out the possibility of several cognitions arising at the same time. The Advaitins regard *antaḥkāraṇa* or the inner instrument of knowledge as a substance constituted by light (*tejas*) and maintain that it is not a sense (*indriya*) in the strict sense of the term and that its modifications (*vṛttayaḥ*) may assume a cognitive, volitional or emotional form according as circumstances vary.

The unswerving fidelity of the Naiyāyikas to realism in a strict sense is mainly responsible for the



than any form of dead matter, except in respect of its fitness for a special kind of activity and of contact with *ātman* ; and it is so in most of the other systems of Indian philosophy. It is, however, where the Nyāya theorist endeavours to maintain the eternity of *ātman* by making it all-pervasive (*vibhu*), that he allows himself to be tripped up by the Advaitic monist, who would triumphantly draw attention to the ultimate *merger* which the recognition of innumerable all-pervasive souls might inevitably result in. It is here that the Nyāya theory of *ātman* stands foredoomed.

It is suggested by some writers that neither Kaṇāda nor Gautama could be said to have intended to give a place in their systems to the conception of God. But it would be difficult to believe that Kaṇāda, who believed in seers and the immense scope and capacity of their knowledge (*ārṣajñāna*), did not believe in the existence of the omniscient God. There are good reasons to believe that Gautama, who would ascribe the authorship of the Veda, to the Greatest *Āpta* (truth-speaker), took God for granted and that Uddyotakara, Vācaspatiśiśra and others were right in suggesting that the refutation of God's causality in the fourth chapter of



CSL

A PRIMER OF INDIAN LOGIC [PART III]

than any form of dead matter, except in respect of its fitness for a special kind of activity and of contact with *ātman*; and it is so in most of the other systems of Indian philosophy. It is, however, where the Nyāya theorist endeavours to maintain the eternity of *ātman* by making it all-pervasive (*vibhu*), that he allows himself to be tripped up by the Advaitic monist, who would triumphantly draw attention to the ultimate *merger* which the recognition of innumerable all-pervasive souls might inevitably result in. It is here that the Nyāya theory of *ātman* stands foredoomed.

It is suggested by some writers that neither Kaṇāda nor Gautama could be said to have intended to give a place in their systems to the conception of God. But it would be difficult to believe that Kaṇāda, who believed in seers and the immense scope and capacity of their knowledge (*ārśajñāna*), did not believe in the existence of the omniscient God. There are good reasons to believe that Gautama, who would ascribe the authorship of the Veda, to the Greatest *Āpta* (truth-speaker), took God for granted and that Uddyotakara, Vācaspatimiśra and others were right in suggesting that the refutation of God's causality in the fourth chapter of

the saviour of the world's Saviour in the following verse which tradition attributes to Udayana :—

“ *Aiśvaryamadamatto'si māmavajñāya vartase |*
“Upasthiteṣu bāuddheṣu madadhīn” lava
sthitiḥ||”.

In Thy almighty power, inebriate thou art and thou dost not care for me. But Thy very existence depends upon me, when the Baud-dhas approach.

13

T—Colour is the quality which is perceived only by the sense of vision. It is of seven kinds—the seven varieties being white, blue, yellow, red, green, brown and variegated. It is found in earth, water and light. Of these three, in earth, all the seven varieties are found. White colour, which is not brilliant, belongs to water. White colour, which is brilliant, belongs to light.



110. A PRIMER OF INDIAN LOGIC [PART III]

the saviour of the world's Saviour in the following verse which tradition attributes to Udayana :—

“ *Aiśvaryamadamatto'si māmavajñāya vartase* |
“ *Upasthiteṣu bāuddheṣu madadhīn*” *tava*
sthitih||”.

In Thy almighty power, inebriate thou art and thou dost not care for me. But Thy very existence depends upon me, when the Baudhas approach.

13

T—Colour is the quality which is perceived only by the sense of vision. It is of seven kinds—the seven varieties being white, blue, yellow, red, green, brown and variegated. It is found in earth, water and light. Of these three, in earth, all the seven varieties are found. White colour, which is not brilliant, belongs to water. White colour, which is brilliant, belongs to light.



CSL

hot and lukewarm. It is found in earth, water and fire. Of these three, to water belongs the cool touch, the hot touch to fire, and the lukewarm touch to earth and air.

17

T—The four qualities beginning with colour are produced in earth through the application of heat and are not eternal. In the case of other substances, they are eternal in such of them as are eternal and they are not eternal in such of them as are not eternal.

The word 'only' in the definition of colour excludes the sense of touch. Thus the definition amounts to this :—that colour is a quality which is perceived in the normal way by the sense of vision and does not come within the range of the normal perception arising from the sense of touch. In this definition it is necessary to refer to 'normal visual



hot and lukewarm. It is found in earth, water and fire. Of these three, to water belongs the cool touch, the hot touch to fire, and the lukewarm touch to earth and air.

17

T—The four qualities beginning with colour are produced in earth through the application of heat and are not eternal. In the case of other substances, they are eternal in such of them as are eternal and they are not eternal in such of them as are not eternal.

The word 'only' in the definition of colour excludes the sense of touch. Thus the definition amounts to this :—that colour is a quality which is perceived in the normal way by the sense of vision and does not come within the range of the normal perception arising from the sense of touch. In this definition it is necessary to refer to 'normal visual

the variegated colour (*citrarūpa*) as a distinct variety. The reason why they have done so is to be found in their theory of *avayavin* (composite structure), which is ultimately attributable to their creationistic view of causation. In the Nyāya theory, a composite product (*avayavin*) is entirely different from its component parts (*avayava*); a cloth which is made up of threads of different colours, is seen as having a variegated colour; the different colours belonging to the threads cannot be said to produce the corresponding colours in the single composite whole, for the reason that colour is a pervasive (*vyāpyavṛtti*) quality, unlike the non-pervasive (*avyāpyavṛtti*) contact, which may be at once present and not present in a composite unit, and for the reason that one composite unit can thus have only one colour; were it true that the cloth of variegated colour has no colour apart from those of the component threads, the composite cloth itself would be devoid of any colour and would therefore become normally invisible, visual perception ordinarily depending upon the presence of colour which is not sub-perceptual (*anudbhūta*) but perceptible (*udbhūta*); and on these grounds, in order to account for the visual perception of a variegated

A PRIMER OF INDIAN LOGIC [PART III]

the variegated colour (*citrarūpa*) as a distinct variety. The reason why they have done so is to be found in their theory of *avayavin* (composite structure), which is ultimately attributable to their creationistic view of causation. In the Nyāya theory, a composite product (*avayavin*) is entirely different from its component parts (*avayava*); a cloth which is made up of threads of different colours, is seen as having a variegated colour; the different colours belonging to the threads cannot be said to produce the corresponding colours in the single composite whole, for the reason that colour is a pervasive (*vyāpyavṛtti*) quality, unlike the non-pervasive (*avyāpyavṛtti*) contact, which may be at once present and not present in a composite unit, and for the reason that one composite unit can thus have only one colour; were it true that the cloth of variegated colour has no colour apart from those of the component threads, the composite cloth itself would be devoid of any colour and would therefore become normally invisible, visual perception ordinarily depending upon the presence of colour which is not sub-perceptual (*anudbhūta*) but perceptible (*udbhūta*); and on these grounds, in order to account for the visual perception of a variegated

116 A PRIMER OF INDIAN LOGIC [PART III

'being burnt'. The Nyāya theorists, on the other hand, hold that composite products are left intact in *pāka* and are not disintegrated and that their colour and such other qualities are replaced by corresponding qualities of different species. This theory of *pāka* maintained by the Naiyāyikas is known as *piṭharapākavāda* or 'the theory of composite wholes being burnt.' It should be remembered, in this connection, that in the Nyāya-Vaiśeṣika system, earth is the only substance which admits of the special process of burning called *pāka*, though contact with fire is quite possible in the case of any other substance.

18

T—Number is the special cause of enumerative expressions, such as one, two and so on. It is present in all the nine substances and it is represented by numbers beginning from *one* and ending with *parār-dha* (one thousand crores of crores). Number *one* may be everlasting or non-eternal—



'being burnt'. The Nyāya theorists, on the other hand, hold that composite products are left intact in *pāka* and are not disintegrated and that their colour and such other qualities are replaced by corresponding qualities of different species. This theory of *pāka* maintained by the Naiyāyikas is known as *piṭharapākavāda* or 'the theory of composite wholes being burnt.' It should be remembered, in this connection, that in the Nyāya-Vaiśeṣika system, earth is the only substance which admits of the special process of burning called *pāka*, though contact with fire is quite possible in the case of any other substance.

18

T—Number is the special cause of enumerative expressions, such as one, two and so on. It is present in all the nine substances and it is represented by numbers beginning from *one* and ending with *parārdha* (one thousand crores of crores). Number *one* may be everlasting or non-eternal—

(*ayam ekaḥ, ayam ekaḥ, āhatya, dvau*). Though a cognition lasts only for two moments (*kṣaṇa*) and comes to an end in the third moment from its origin, *apekṣābuddhi* lasts three moments from its origin and comes to an end in the fourth moment. Why the exponents of the Nyāya-Vaiśeṣika system allow a longer lease of life to *apekṣābuddhi* than to other varieties of cognition requires some explanation. *Apekṣābuddhi* is the cause of 'two' (*dvitva*) and the higher numbers. If *apekṣābuddhi* were to come to an end at the third moment from its origin, *dvitva* would come to an end at the fourth moment of *apekṣābuddhi*. *Apekṣābuddhi* arises at a particular moment; at the next moment, *dvitva* arises, and may come into relation with an external sense—say sight—at that moment; the indeterminate perception of *dvitvatva* (*dvitvatva-nirvikalpa*) comes into being at the third moment and the determinate perception of *dvitva* arises at the fourth moment; if *apekṣābuddhi* were to come to an end at its third moment, *dvitva* would cease to exist at the fourth moment, when it is actually seen; and to say that a thing is seen at the moment at which it ceases to exist is obviously absurd. In order to avoid this absurd

(*ayam ekaḥ, ayam ekaḥ, āhatya, dvau*). Though a cognition lasts only for two moments (*kṣaṇa*) and comes to an end in the third moment from its origin, *apekṣābuddhi* lasts three moments from its origin and comes to an end in the fourth moment. Why the exponents of the Nyāya-Vaiśeṣika system allow a longer lease of life to *apekṣābuddhi* than to other varieties of cognition requires some explanation. *Apekṣābuddhi* is the cause of 'two' (*dvitva*) and the higher numbers. If *apekṣābuddhi* were to come to an end at the third moment from its origin, *dvitva* would come to an end at the fourth moment of *apekṣābuddhi*. *Apekṣābuddhi* arises at a particular moment; at the next moment, *dvitva* arises, and may come into relation with an external sense—say sight—at that moment; the indeterminate perception of *dvitvatva* (*dvitvatva-nirvikalpaka*) comes into being at the third moment and the determinate perception of *dvitva* arises at the fourth moment; if *apekṣābuddhi* were to come to an end at its third moment, *dvitva* would cease to exist at the fourth moment, when it is actually seen; and to say that a thing is seen at the moment at which it ceases to exist is obviously absurd. In order to avoid this absurd

numbers called *dvitva*, arises; then follows the determinate perception of *dvitva*; then the two substances having *dvitva* are cognised; and lastly such a cognition produces the corresponding impression (*saṁskāra*) in the soul." While *ekatva* is completely contained in a single container (*pratyeke-paryāpta*), *dvitva* and the higher numbers are partially contained (*vyāsajyavṛtti*) in each of the containers and completely contained only in groups of two and so on.

The Nyāya conception of number—more especially of two and the higher numbers—as qualities inhering in substance may be described by the opponents of the Nyāya-Vaiśeṣika realism and pluralism, as well as by the exponents of the modern school of Nyāya (*navya-nyāya*), as specimens of the warty overgrowths disfiguring the complexion of Nyāya realism. But shrewd critics who can probe into the heart of Nyāya may be able to find in it an effective check to monistic thought which seeks to efface completely all the numbers and their metaphysical implications holding together the component parts of the social fabric.



numbers called *dvitva*, arises; then follows the determinate perception of *dvitva*; then the two substances having *dvitva* are cognised; and lastly such a cognition produces the corresponding impression (*saṁskāra*) in the soul." While *ekatva* is completely contained in a single container (*pratyeṅka-paryāpta*), *dvitva* and the higher numbers are partially contained (*vyāsajyavṛtti*) in each of the containers and completely contained only in groups of two and so on.

The Nyāya conception of number—more especially of two and the higher numbers—as qualities inhering in substance may be described by the opponents of the Nyāya-Vaiśeṣika realism and pluralism, as well as by the exponents of the modern school of Nyāya (*navya-nyāya*), as specimens of the warty overgrowths disfiguring the complexion of Nyāya realism. But shrewd critics who can probe into the heart of Nyāya may be able to find in it an effective check to monistic thought which seeks to efface completely all the numbers and their metaphysical implications holding together the component parts of the social fabric.



A PRIMER OF INDIAN LOGIC [PART II]

CSL

causes of expressions such as 'this is remote,' 'this is near'. They are found in the four substances beginning with earth and in *manas*. They are of two kinds, those that are due to time and those due to space. In a remote substance, spatial remoteness is found; and in a substance lying near, spatial proximity is found. In an older person, temporal remoteness is found; and in a younger person, temporal proximity is found.

It will be seen that sections 18 to 21 and section 23 in the text define number, size, contact, remoteness and proximity as special causes of the respective expressions which refer to them. The term *vyavahāra* is used in the text and is usually understood in the sense of 'expression in words' or 'putting into words' (*śabdaprayoga*). One cannot say 'this is one' (*ayamekah*) or 'this is



causes of expressions such as 'this is remote,' 'this is near'. They are found in the four substances beginning with earth and in *manas*. They are of two kinds, those that are due to time and those due to space. In a remote substance, spatial remoteness is found; and in a substance lying near, spatial proximity is found. In an older person, temporal remoteness is found; and in a younger person, temporal proximity is found.

It will be seen that sections 18 to 21 and section 23 in the text define number, size, contact, remoteness and proximity as special causes of the respective expressions which refer to them. The term *vyavahāra* is used in the text and is usually understood in the sense of 'expression in words' or 'putting into words' (*śabdaprayoga*). One cannot say 'this is one' (*ayamekah*) or 'this is



pervasive substance; or it is the number (*saṃkhyā*) of the component parts, as in the case of the sizes of a triad and a dyad; or it is loose contact (*pracaya*) of the component parts as in the case of a ball of cotton. The two sizes denoted by the words 'long' and 'short' (*dīrghatva* and *hrasvatva*) may well be brought under *mahattva* and *aṇutva* and need not be recognised to be distinct varieties of size.

The distinct position which separateness (*pr̥thaktva*) occupies in the list of qualities recognised by the Vaiśeṣikas is dependent chiefly upon the view that the experience embodied in the proposition 'A jar stands out separate from a cloth' (*ghaṭaḥ paṭāt pr̥thak*) should be distinguished from the experience embodied in the proposition 'A jar is not a cloth' (*ghaṭaḥ paṭo na*) and that the former should be interpreted as an affirmative proposition referring to the positive entity called *pr̥thaktva* and the latter as a negative proposition referring to the negative category of reciprocal non-existence called *anyonyābhāva*. Though the older Naiyāyikas support this view, some of the later Naiyāyikas like Raghunātha-śiromaṇi shrewdly see that this way of differentiating *pr̥thaktva* from

pervasive substance; or it is the number (*saṃkhyā*) of the component parts, as in the case of the sizes of a triad and a dyad; or it is loose contact (*pracaya*) of the component parts as in the case of a ball of cotton. The two sizes denoted by the words 'long' and 'short' (*dīrghatva* and *hrasvatva*) may well be brought under *mahattva* and *anūtvā* and need not be recognised to be distinct varieties of size.

The distinct position which separateness (*prithaktva*) occupies in the list of qualities recognised by the Vaiśeṣikas is dependent chiefly upon the view that the experience embodied in the proposition 'A jar stands out separate from a cloth' (*ghaṭaḥ paṭāt prithak*) should be distinguished from the experience embodied in the proposition 'A jar is *not* a cloth' (*ghaṭaḥ paṭo na*) and that the former should be interpreted as an affirmative proposition referring to the positive entity called *prithaktva* and the latter as a negative proposition referring to the negative category of reciprocal non-existence called *anyonyābhāva*. Though the older Naiyāyikas support this view, some of the later Naiyāyikas like Raghunātha-śiromaṇi shrewdly see that this way of differentiating *prithaktva* from

a contact which does not cause sound or does not cause some activity of the kind described is called *nodana* (pushing). In the Nyāya system, contact is a typical instance of a non-pervasive object (*avyāpyavṛtti*). Certain things are spatially non-pervasive (*daiśikāvyāpyavṛtti*); for instance, contact with a monkey (*kāpisaṁyoga*) is spatially non-pervasive in the sense that it may be said to be present and not present in the same tree at the same time, with reference to its top and foot. In a similar way, all the producible things (*janya-padārtha*) are temporally non-pervasive in the sense that they may be said to be present and not present in undivided time (*mahākāla*), with reference to the periods preceding and following their production. Advanced students of Advaita may realise that the conception of *avyāpyavṛttilva* developed by the Naiyāyikas is, indeed, used by them as their life-belt when they have to save their realism from being drowned in the Advaitic deluge in which everything other than the absolute Brahman sinks down to the level of *mithyā* (unreal) and turns out to be relatively real in the sense that it co-exists with its own non-existence.



126 A PRIMER OF INDIAN LOGIC [PART III

a contact which does not cause sound or does not cause some activity of the kind described is called *nodana* (pushing). In the Nyāya system, contact is a typical instance of a non-pervasive object (*avyāpyavṛtti*). Certain things are spatially non-pervasive (*daiśikāvyāpyavṛtti*); for instance, contact with a monkey (*kāpisaṁyoga*) is spatially non-pervasive in the sense that it may be said to be present and not present in the same tree at the same time, with reference to its top and foot. In a similar way, all the producible things (*janya-padārtha*) are temporally non-pervasive in the sense that they may be said to be present and not present in undivided time (*mahākāla*), with reference to the periods preceding and following their production. Advanced students of Advaita may realise that the conception of *avyāpyavṛttilva* developed by the Naiyāyikas is, indeed, used by them as their life-belt when they have to save their realism from being drowned in the Advaitic deluge in which everything other than the absolute Brahman sinks down to the level of *mithyā* (unreal) and turns out to be relatively real in the sense that it co-exists with its own non-existence.

activity, comes into contact with a tree and the hand likewise comes into contact with the same tree as a result of its movement, the finger may be moved away from the tree and thus lose its contact with the tree; in that case, one speaks of the hand also losing contact with the same tree; the movement of the finger may cause the loss of contact between the finger and the tree; and this movement does not belong to the hand and cannot, therefore, have anything to do with the loss of contact between the hand and the tree. In such instances, the loss of *saṁyoga* should be attributed to a cause other than movement (*karma*) and this cause is called *vibhāga* or disjunction. By a process of elimination, disjunction is brought under the category called *guṇa*. This argument set forth by the Vaiśeṣikas to maintain that *vibhāga* is a distinct quality involves many an assumption which cannot be satisfactorily sustained. The later Naiyāyikas realise the weak points in this argument and bring *vibhāga* under loss of contact (*saṁyoganāśa*).

The qualities mentioned above, *viz.*—number, size, separateness, contact, disjunction, remoteness and proximity, and fluidity and viscosity are capable of being perceived by two of the external senses—

activity, comes into contact with a tree and the hand likewise comes into contact with the same tree as a result of its movement, the finger may be moved away from the tree and thus lose its contact with the tree; in that case, one speaks of the hand also losing contact with the same tree; the movement of the finger may cause the loss of contact between the finger and the tree; and this movement does not belong to the hand and cannot, therefore, have anything to do with the loss of contact between the hand and the tree. In such instances, the loss of *samyoga* should be attributed to a cause other than movement (*karma*) and this cause is called *vibhāga* or disjunction. By a process of elimination, disjunction is brought under the category called *guṇa*. This argument set forth by the Vaiśeṣikas to maintain that *vibhāga* is a distinct quality involves many an assumption which cannot be satisfactorily sustained. The later Naiyāyikas realise the weak points in this argument and bring *vibhāga* under loss of contact (*samyoganāśa*).

The qualities mentioned above, *viz.*—number, size, separateness, contact, disjunction, remoteness and proximity, and fluidity and viscosity are capable of being perceived by two of the external senses—



and such other varieties of light.

26

T—Viscosity is the quality which causes the lumping up of powder etc.—*i.e.* the particles of powder etc., to adhere to each other. It belongs only to water.

The above definitions of *gurutva*, *dravatva* and *sneha* have hardly any scientific value and they are based wholly on speculation resting upon certain popular notions. It should be noted that *gurutva* (weight), according to Nyāya theorists, is beyond the range of sense-perception (*atīndriya*). The Nāyāyikas maintain that, though oil and such other substances appear to have viscosity (*sneha*), it really belongs to water which forms part of those substances.

27

T.—Sound is a quality which is perceived by the ear. It belongs only to the ether. It is of two kinds—*viz.* noise and alphabetic



and such other varieties of light.

26

T—Viscosity is the quality which causes the lumping up of powder etc.—*i.e.* the particles of powder etc., to adhere to each other. It belongs only to water.

The above definitions of *gurutva*, *dravatva* and *sneha* have hardly any scientific value and they are based wholly on speculation resting upon certain popular notions. It should be noted that *gurutva* (weight), according to Nyāya theorists, is beyond the range of sense-perception (*atīndriya*). The Nāīyāyikas maintain that, though oil and such other substances appear to have viscosity (*sneha*), it really belongs to water which forms part of those substances.

27

T.—Sound is a quality which is perceived by the ear. It belongs only to the ether. It is of two kinds.—*viz.* noise and alphabetic



caused in the portion of ether representing the sense of hearing and is actually heard. The Naiyāyikas explain the way in which a sound-series is produced in auditory perception, by means of two illustrations—*viz.* the illustration of 'little wave and big wave' (*vicīṭaraṅganyāya*) and the illustration of *kadamba* buds. These two illustrations suggest two ways of explaining how a sound comes to be heard on all sides and in all the ten directions, including the intermediate points and up and down. A little circular wave springs up; around it a bigger wave arises; around it a still bigger wave and so on; in this way, a circular wave of sound is caused, around it a bigger sound-wave and so on, until at last a certain sound-wave is produced in such a way that it reaches the senses of hearing which may be fit and ready to hear in all the ten directions. In this explanation, there is only one series consisting of several circular sound-waves, each coming into relation with all the ten directions. One *kadamba* filament—which first shoots up, causes several *kadamba* filaments to shoot up simultaneously in all the parts of a *kadamba* flower; in the same way, the first sound, produced at some point, causes ten sounds to spring up simultaneously in all the ten

A PRIMER OF INDIAN LOGIC [PART III]

caused in the portion of ether representing the sense of hearing and is actually heard. The Naiyāyikas explain the way in which a sound-series is produced in auditory perception, by means of two illustrations—*viz.* the illustration of 'little wave and big wave' (*vīcītaraṅganyāya*) and the illustration of *kadamba* buds. These two illustrations suggest two ways of explaining how a sound comes to be heard on all sides and in all the ten directions, including the intermediate points and up and down. A little circular wave springs up; around it a bigger wave arises; around it a still bigger wave and so on; in this way, a circular wave of sound is caused, around it a bigger sound-wave and so on, until at last a certain sound-wave is produced in such a way that it reaches the senses of hearing which may be fit and ready to hear in all the ten directions. In this explanation, there is only one series consisting of several circular sound-waves, each coming into relation with all the ten directions. One *kadamba* filament—which first shoots up, causes several *kadamba* filaments to shoot up simultaneously in all the parts of a *kadamba* flower; in the same way, the first sound, produced at some point, causes ten sounds to spring up simultaneously in all the ten

the theory of the eternity of *varṇas* if one remembers that the Mīmāṃsā theory of the eternity of the *Vedas* rests upon the eternity of *varṇas*. The Vaiyākaraṇas hold that the transcendental substratum of *varṇas* called *sphoṭa* is real and permanent and that *varṇas* themselves are not permanent. The Nyāya-Vaiśeṣika system maintains that every *varṇa* is caused and the *Vedas* themselves were produced by God, the recognition of the same *varṇa* like 'This *g* is that' (*So'yam ga-kārah*) being interpreted as referring to the permanent *jāti* called *gatva* and not to the same *g* sound (*ga-vyakti*).

28

T—(a) *Buddhi* and *Jñāna* are the same thing, and stand for cognition which is the cause of all verbal expressions. It is of two kinds—recollection and experience.

(b) Recollection is the cognition which is caused only by reminiscent impression.



134 A PRIMER OF INDIAN LOGIC [PAR III]

the theory of the eternity of *varṇas* if one remembers that the Mīmāṃsā theory of the eternity of the *Vedas* rests upon the eternity of *varṇas*. The Vaiyākaraṇas hold that the transcendental substratum of *varṇas* called *sphoṭa* is real and permanent and that *varṇas* themselves are not permanent. The Nyāya-Vaiśeṣika system maintains that every *varṇa* is caused and the *Vedas* themselves were produced by God, the recognition of the same *varṇa* like 'This *g* is that' (*So'yam ga-kāraḥ*) being interpreted as referring to the permanent *jāti* called *gatva* and not to the same *g* sound (*ga-vyakti*).

28

T—(a) *Buddhi* and *Jñāna* are the same thing, and stand for cognition which is the cause of all verbal expressions. It is of two kinds—recollection and experience.

(b) Recollection is the cognition which is caused only by reminiscent impression.



of inference, assimilation,
and sentence or proposition.

Buddhi is an ambiguous term and it is used in various senses in Sanskrit philosophical literature. Sometimes it is used in the sense of *antaḥkaraṇa*—the inner organ of knowledge. It is also used in the sense of determination (*niścaya*), which is an aspect or modification of *antaḥkaraṇa*, according to the Sāṃkhyas and Advaitins: and the connected words *mati* and *manas* are contrasted with *buddhi* in this sense, the word *mati* being used in the sense of imagination or imaginative cognition of something yet to come about (*matirāgāmigocarā*) and the word *manas* in the sense of a dubitative activity of *antaḥkaraṇa* which corresponds to doubt (*vimarśātmakam manah*). The Naiyāyikas are quite consistent and definite in their use of the term *buddhi*, and they always take it to be synonymous with *mati*, *upalabdhi* and *jñāna*; and they take *manas* to be equivalent to *antaḥkaraṇa*.

In the text, Annambhaṭṭa's definition of *buddhi* can be explained in two ways. The former part of the text—*sarvavyavahārahetuḥ*—may be taken to form the definition with the addition of the word *guṇa* (quality) and the term *jñāna* in the text may



of inference, assimilation,
and sentence or proposition.

Buddhi is an ambiguous term and it is used in various senses in Sanskrit philosophical literature. Sometimes it is used in the sense of *antaḥkaraṇa*—the inner organ of knowledge. It is also used in the sense of determination (*niścaya*), which is an aspect or modification of *antaḥkaraṇa*, according to the Sāṃkhyas and Advaitins: and the connected words *matī* and *manas* are contrasted with *buddhi* in this sense, the word *matī* being used in the sense of imagination or imaginative cognition of something yet to come about (*matirāgāmigocarā*) and the word *manas* in the sense of a dubitative activity of *antaḥkaraṇa* which corresponds to doubt (*vimarśātmakam manah*). The Naiyāyikas are quite consistent and definite in their use of the term *buddhi*, and they always take it to be synonymous with *matī*, *upalabdhi* and *jñāna*; and they take *manas* to be equivalent to *antaḥkaraṇa*.

In the text, Annambhaṭṭa's definition of *buddhi* can be explained in two ways. The former part of the text—*sarvavyavahārahetuḥ*—may be taken to form the definition with the addition of the word *guṇa* (quality) and the term *jñāna* in the text may

thus the definition "*sarvavyavahārahetuḥ*" is vitiated by the defect of *avyāpti* (partial inapplicability or narrowness). In order to remove this defect, the usual device of *jātighaṭitalakṣaṇa* is resorted to and the scope of the definition is increased in this modified form—"Knowledge or cognition has a *jāti* which is not found in colour and such other qualities and which is co-existent with the causality of intercommunication through speech". This is indeed a clumsy definition. Annambhaṭṭa himself sees this and suggests in his *Dīpikā* that the former part of the text "*sarvavyavahārahetuḥ*" may be taken to be merely explanatory and the latter part "*jñānam buddhiḥ*" as the definition. In the *Dīpikā*, Annambhaṭṭa says "*Jñānāmītyanuvyavasāyagamyam jñānatvameva lakṣaṇam—iti bhāvaḥ.*" Thus according to him, *Jñānatva* (cognitionness), which is the generic attribute (*jāti*) characterising all cognitions, is the distinctive feature (*asādhārāṇadharmā*) of cognition. He also suggests that the *jāti*, called *jñānatva*, is arrived at through the uniform experience of a cognition which invariably assumes a form like this—'I cognise a jar' (*ghaṭam aham jñāmi*), or 'I cognise a cloth' (*paṭam aham jñāmi*). In such cases, the speaker is aware



thus the definition "*sarvavyavahārahetuḥ*" is vitiated by the defect of *avyāpti* (partial inapplicability or narrowness). In order to remove this defect, the usual device of *jātighaṭitalakṣaṇa* is resorted to and the scope of the definition is increased in this modified form—"Knowledge or cognition has a *jāti* which is not found in colour and such other qualities and which is co-existent with the causality of intercommunication through speech". This is indeed a clumsy definition. Annambhaṭṭa himself sees this and suggests in his *Dīpikā* that the former part of the text "*sarvavyavahārahetuḥ*" may be taken to be merely explanatory and the latter part "*jñānam buddhiḥ*" as the definition. In the *Dīpikā*, Annambhaṭṭa says "*Jñānamītyanuvyavasāyagamyam jñānatvameva lakṣaṇam—iti bhāvah.*" Thus according to him, *Jñānatva* (cognitionness), which is the generic attribute (*jāti*) characterising all cognitions, is the distinctive feature (*asādhāraṇa-dharma*) of cognition. He also suggests that the *jāti*, called *jñānatva*, is arrived at through the uniform experience of a cognition which invariably assumes a form like this—"I cognise a jar" (*ghaṭam aham jñāmi*), or 'I cognise a cloth' (*ṣaṭam aham jñāmi*). In such cases, the speaker is aware



word *buddhi* being that which first springs up ($\sqrt{\text{budh}} = \sqrt{\text{udbudh}} = \text{to spring up}$) and that of the word *mahat* being that which grows out of, and into, something else ($\sqrt{\text{mah}} = \text{to grow or evolve}$). This principle called *buddhi* is the first evolute evolved out of the primordial matter, called *mūlaprakṛti*, and is, in itself, but a form of dead matter. However, through proximity to the self-luminous *consciousness* (*cit*), called *puruṣa*, the material evolute, *buddhi*, comes to be enlivened, as it were, by *consciousness* (*caitanya*) and undergoes various transformations, of which one of the most important is called *adhyavasāya* (determinative cognition). *Adhyavasāya*, in the Sāṃkhya sense, usually takes the form "This should be done by me" (*idam kartavyam mayā*). The Sāṃkhyas describe *buddhi*, in its *adhyavasāya* phase, as consisting of three constituent factors (*aṃśatrayavatī buddhiḥ*). These three factors are the egoic element (*madamśaḥ*), the element of voluntary decision (*kartavyamiti vyāpārāṃśaḥ*), and the objective element of 'this' (*idamāṃśaḥ*). The egoic element or *madamśa*, in the Sāṃkhya terminology, is said to represent what is called *puruṣoparāga*, which is an unreal element consisting in the reflection of the ab-



CSL

140 A PRIMER OF INDIAN LOGIC [PART III]

word *buddhi* being that which first springs up ($\sqrt{budh} = \sqrt{udbudh}$ = to spring up) and that of the word *mahat* being that which grows out of, and into, something else ($\sqrt{mah}$ = to grow or evolve). This principle called *buddhi* is the first evolute evolved out of the primordial matter, called *mūlaprakṛti*, and is, in itself, but a form of dead matter. However, through proximity to the self-luminous consciousness (*cit*), called *puruṣa*, the material evolute, *buddhi*, comes to be enlivened, as it were, by consciousness (*caitanya*) and undergoes various transformations, of which one of the most important is called *adhyavasāya* (determinative cognition). *Adhyavasāya*, in the Sāṅkhya sense, usually takes the form "This should be done by me" (*idam kartavyam mayā*). The Sāṅkhyas describe *buddhi*, in its *adhyavasāya* phase, as consisting of three constituent factors (*aṁśatrayavatī buddhiḥ*). These three factors are the egoic element (*madamāṁśaḥ*), the element of voluntary decision (*kartavyamiti vyāpārāṁśaḥ*), and the objective element of 'this' (*idamāṁśaḥ*). The egoic element or *madamāṁśa*, in the Sāṅkhya terminology, is said to represent what is called *puruṣoparāga*, which is an unreal element consisting in the reflection of the ab-

dim. In this illustration, the dimness caused on the surface of the mirror is real and the fancied relation between this dimness and the face itself that is reflected in the mirror is unreal. Similarly, *jñāna* which is the cognitive modification of the first evolute (*buddhi*), is a real factor ; and it comes to have a false relation with *puruṣa* through his reflection in *buddhi*, in the same way as the dimness of the mirror comes to have a false relation with the real face through its reflection. This false relation is called *upalabdhi* (apprehension). It will be seen that, in the Sāṃkhya theory, *jñāna* is entirely material in its nature and origin and becomes apparently spiritualised to some extent when it comes to have a false relation with *puruṣa* ; and this false relation with the spirit is called *upalabdhi* and is presented in experiences like ' I apprehend ' (*aham upalabhe*). The Naiyāyikas contend that the substratum of voluntary decision (*kṛti*) ought to be regarded as the substratum also of knowledge or cognition (*jñāna*) which there is hardly adequate reason to distinguish from consciousness (*caitanya*) or apprehension (*upalabdhi*). This contention is embodied in Gautama's *sūtra* "*buddhirupalabdhirjñānamityanarthāntaram*" ; and stu-

dim. In this illustration, the dimness caused on the surface of the mirror is real and the fancied relation between this dimness and the face itself that is reflected in the mirror is unreal. Similarly, *jñāna* which is the cognitive modification of the first evolute (*buddhi*), is a real factor ; and it comes to have a false relation with *puruṣa* through his reflection in *buddhi*, in the same way as the dimness of the mirror comes to have a false relation with the real face through its reflection. This false relation is called *upalabdhi* (apprehension). It will be seen that, in the Sāṃkhya theory, *jñāna* is entirely material in its nature and origin and becomes apparently spiritualised to some extent when it comes to have a false relation with *puruṣa* ; and this false relation with the spirit is called *upalabdhi* and is presented in experiences like ' I apprehend ' (*aham upalabhe*). The Naiyāyikas contend that the substratum of voluntary decision (*kṛti*) ought to be regarded as the substratum also of knowledge or cognition (*jñāna*) which there is hardly adequate reason to distinguish from consciousness (*caitanya*) or apprehension (*upalabdhi*). This contention is embodied in Gautama's *sūtra* "*buddhirupalabdhirjñānamityanarthāntaram*" ; and stu-

such centaurian and monstrous complexes. Thus, in the Nyāya thoery, it has become necessary to bring recognition under perceptual experience of a special type and to exclude it from the scope of the definition of recollection (*smṛti*). The Nyāya theory of *smṛti* is that certain kinds of cognition, which are different from indifference (*upekṣā*), invariably leave reminiscent impressions (*bhāvanārūpasamskāra*) in *ātman* and that these impressions are kindled up under certain conditions and cause recollection. Every group of reminiscent impressions causing a recollection comes to an end immediately after its effect is produced. But this would not mean that after once recollecting something, it would no longer be possible to recall it again to memory; for, every recollection would, in its turn, cause a reminiscent impression. Thus, according to the older Nyāya theory, every recollection, even when it relates to the same object, is caused by a different set of reminiscent impressions. Later Naiyāyikas and Advaitins, on the other hand, hold that the recollections of the same object are all produced by the same set of reminiscent impressions, which merely acquire enhanced intensity through every recollection. Cognitions which admit of being reproduced in memory through reminiscent



such centaurian and monstrous complexes. Thus, in the Nyāya theory, it has become necessary to bring recognition under perceptual experience of a special type and to exclude it from the scope of the definition of recollection (*smṛti*). The Nyāya theory of *smṛti* is that certain kinds of cognition, which are different from indifference (*upekṣā*), invariably leave reminiscent impressions (*bhāvanārūpasamīkāra*) in *ātman* and that these impressions are kindled up under certain conditions and cause recollection. Every group of reminiscent impressions causing a recollection comes to an end immediately after its effect is produced. But this would not mean that after once recollecting something, it would no longer be possible to recall it again to memory; for, every recollection would, in its turn, cause a reminiscent impression. Thus, according to the older Nyāya theory, every recollection, even when it relates to the same object, is caused by a different set of reminiscent impressions. Later Naiyāyikas and Advaitins, on the other hand, hold that the recollections of the same object are all produced by the same set of reminiscent impressions, which merely acquire enhanced intensity through every recollection. Cognitions which admit of being reproduced in memory through reminiscent



Anubhava is divided in Nyāya literature into real (*yathārtha*) and unreal (*ayathārtha*). The first variety is also called *pramā* and the second variety is also called *bhrama*. The etymology of the term *pramā* draws attention to the fact that the experience denoted by that term is *sound* or *valid*, as the prefix *pra* indicates. The etymology of the term *bhrama* draws attention to the fact that the thinker's mind *goes astray* in every case of erroneous experience. The term *yathārtha* means exactly corresponding to the object; and the definition of valid experience, that it cognises an attribute as belonging to an object which really has it, is directly based on the meaning of the term *yathārtha*; and likewise, the definition of erroneous experience, that it cognises an attribute as belonging to an object which, in fact, does not have it, is based on the meaning of the term *ayathārtha*. To cognise a piece of silver lying before one as a piece of silver (*purovartini rajate 'idam rajatam' iti pratītiḥ*) is valid experience; and to cognise a shell, or mother of pearl, or nacre as it is called, as a piece of silver (*śuktau 'idam rajatam' iti pratītiḥ*) is erroneous experience.

Anubhava is divided in Nyāya literature into real (*yathārtha*) and unreal (*ayathārtha*). The first variety is also called *pramā* and the second variety is also called *bhrama*. The etymology of the term *pramā* draws attention to the fact that the experience denoted by that term is *sound* or *valid*, as the prefix *pra* indicates. The etymology of the term *bhrama* draws attention to the fact that the thinker's mind *goes astray* in every case of erroneous experience. The term *yathārtha* means exactly corresponding to the object ; and the definition of valid experience, that it cognises an attribute as belonging to an object which really has it, is directly based on the meaning of the term *yathārtha* ; and likewise, the definition of erroneous experience, that it cognises an attribute as belonging to an object which, in fact, does not have it, is based on the meaning of the term *ayathārtha*. To cognise a piece of silver lying before one as a piece of silver (*purovartini rajate 'idam rajatam' iti pratītiḥ*) is valid experience ; and to cognise a shell, or mother of pearl, or nacre as it is called, as a piece of silver (*śuklau 'idam rajatam' iti pratītiḥ*) is erroneous experience.

of *viśayatā* known as *viśayitā* (subjectness). *Viśayitā* is also a kind of self-linking relation and is merely a phase of the *viśayin* which cognises. The Naiyāyikas hold that, while several realities may exist independently of cognition, the latter never exists independently of, and as dissociated from, the objects that are cognised ; and this is regarded by the Nyāya theorists as a state of things fatal to idealism. They forget, however, that their realism ultimately rests upon experience and what is relied upon as the only guarantee of the objective reality of the external world is the content or form which is involved in experience, and which idealism or subjectivism can easily merge in cognition.

The Nyāya relation of *viśayaviśayibhāva* involves two correlated parts known as *viśayatā* (objectness) and *viśayitā* (subjectness) and the correlation of these two parts is denoted by the word *nirūpita*. The objective content of a determinate cognition or judgment is constituted by three parts *viz.*—the principal or leading concept called *viśeṣya* (substantive), one or more subordinate concepts called *viśeṣaṇa* or *prakāra* (adjunct), and a relation (*samsarga*) connecting the *viśeṣaṇa* and *viśeṣya*. These three parts form the complex object (*viśaya*)

of *viṣayatā* known as *viṣayitā* (subjectness). *Viṣayitā* is also a kind of self-linking relation and is merely a phase of the *viṣayin* which cognises. The Naiyāyikas hold that, while several realities may exist independently of cognition, the latter never exists independently of, and as dissociated from, the objects that are cognised; and this is regarded by the Nyāya theorists as a state of things fatal to idealism. They forget, however, that their realism ultimately rests upon experience and what is relied upon as the only guarantee of the objective reality of the external world is the content or form which is involved in experience, and which idealism or subjectivism can easily merge in cognition.

The Nyāya relation of *viṣayaviṣayibhāva* involves two correlated parts known as *viṣayatā* (objectness) and *viṣayitā* (subjectness) and the correlation of these two parts is denoted by the word *nirūpita*. The objective content of a determinate cognition or judgment is constituted by three parts *viz.*—the principal or leading concept called *viśeṣya* (substantive), one or more subordinate concepts called *viśeṣaṇa* or *prakāra* (adjunct), and a relation (*samsarga*) connecting the *viśeṣaṇa* and *viśeṣya*. These three parts form the complex object (*viṣaya*)

150 A PRIMER OF INDIAN LOGIC [PART III

(qualityness), but under the specific aspect of *raktatva* (red-colourness); and *samavāya* (inherence) is presented as *sāmsarga*, not under the aspect of *sambandhatva* (relationness), but under the specific aspect of *samavāyatva* (inherenceness). The required specifications in these cases are made by referring to *paṭatva*, *raktatva* and *samavāyatva* as the delimiting adjuncts (*avacchedaka*) respectively of the *viśeṣyatā* in the cloth, the *prakāratā* in the red-colour and the *sāmsargatā* in inherence. Thus by a clever use of the terms *avacchedaka* (delimiting), *avacchedya* or *avacchinna* (delimited), and *nirūpaka* or *nirūpita* (correlating or correlated), in the instance taken for illustration, viz :— the judgment '*raktaḥ paṭaḥ*' (the cloth is red), the objective content may be described in the following way, with a considerable measure of quantitative precision:—
 "It is a cognition whose *viśayitā* (subjectness) is correlated to the *viśeṣyatā* (substantiveness) delimited by clothness (*paṭatva*), the *viśeṣyatā* in its turn being correlated to the *prakāratā* (adjunctness) delimited by red-colourness (*rakta-rūpatva*), and the *sāmsargatā* (relationness) correlated to the said *prakāratā* and *viśeṣyatā* being delimited by inherenceness (*samavāyatva*). The Sanskrit expression which

A PRIMER OF INDIAN LOGIC [PART III]

(qualityness), but under the specific aspect of *raktatva* (red-colourness); and *samavāya* (inherence) is presented as *saṁsarga*, not under the aspect of *sambandhatva* (relationness), but under the specific aspect of *samavāyatva* (inherenceness). The required specifications in these cases are made by referring to *paṭatva*, *raktatva* and *samavāyatva* as the delimiting adjuncts (*avacchedaka*) respectively of the *viśeṣyatā* in the cloth, the *prakāratā* in the red-colour and the *saṁsargatā* in inherence. Thus by a clever use of the terms *avacchedaka* (delimiting), *avacchedya* or *avacchinna* (delimited), and *nirūpaka* or *nirūpita* (correlating or correlated), in the instance taken for illustration, viz :— the judgment '*raktaḥ paṭaḥ*' (the cloth is red), the objective content may be described in the following way, with a considerable measure of quantitative precision:—
“ It is a cognition whose *viśayitā* (subjectness) is correlated to the *viśeṣyatā* (substantiveness) delimited by clothness (*paṭatva*), the *viśeṣyatā* in its turn being correlated to the *prakāratā* (adjunctness) delimited by red-colourness (*rakta-rūpatva*), and the *saṁsargatā* (relationness) correlated to the said *prakāratā* and *viśeṣyatā* being delimited by inherenceness (*samavāyatva*). The Sanskrit expression which

silver (*śukti* and *rajata*) may both be present in a certain place; a group-cognition, which at once mistakes nacre for silver and silver for nacre, may arise; it is a *samūhāmbanabhrama* which takes the form.—“These are silver and nacre” (*ime rajataśukṭī*); the definition of *pramā* as given in the text would be applicable to this case of *bhrama*, for the reason that silverness (*rajatatva*) and nacreness (*śukṭitva*) are presented as attributes (*prakāra*) and the two things, nacre and silver, which really have the two attributes mentioned, are presented as leading concepts (*viśeṣya*). There is nothing in the definition of *pramā*, as given in the text, which would exclude such cases of *samūhāmbanabhrama*. To exclude such cases, it is necessary to point out that the adjunctness (*prakāratā*) of the attribute presented in a valid cognition is correlated with the substantiveness (*viśeṣyatā*) of the thing really having that attribute. In the erroneous group-cognition (*samūhāmbana*) above referred to, the substantiveness of nacre is not rightly correlated with the adjunctness of nacreness but wrongly correlated with the adjunctness of silverness; and similarly the adjunctness of nacreness and the substantiveness of silverness are

silver (*śukti* and *rajata*) may both be present in a certain place; a group-cognition, which at once mistakes nacre for silver and silver for nacre, may arise; it is a *samūhāmbanabhrama* which takes the form.—“These are silver and nacre” (*ime rajataśuktī*); the definition of *pramā* as given in the text would be applicable to this case of *bhrama*, for the reason that silverness (*rajatatva*) and nacreness (*śuktitva*) are presented as attributes (*prakāra*) and the two things, nacre and silver, which really have the two attributes mentioned, are presented as leading concepts (*viśeṣya*). There is nothing in the definition of *pramā*, as given in the text, which would exclude such cases of *samūhāmbanabhrama*. To exclude such cases, it is necessary to point out that the adjunctness (*prakāratā*) of the attribute presented in a valid cognition is correlated with the substantiveness (*viśeṣyatā*) of the thing really having that attribute. In the erroneous group-cognition (*samūhāmbana*) above referred to, the substantiveness of nacre is not rightly correlated with the adjunctness of nacreness but wrongly correlated with the adjunctness of silverness; and similarly the adjunctness of nacreness and the substantiveness of silverness are

A PRIMER OF INDIAN LOGIC [PART III]

(*viśeṣyatā*) of the former is presented as correlated with the adjunctness (*prakāratā*) of the latter. This definition would be applicable to cases of erroneous cognition like 'this is silver' (*idam rajatam*), where nacre is mistaken for silver; and it also excludes cases of valid group-cognition (*samūhā-lambanāpramā*) like 'these are silver and nacre' (*ime rajatāśchakṛā*), where both silver and nacre are seen as *samūhā* not confounded with each other.

In this connection, it is desirable to say a few words about the way in which the Nyāya theorist solves the problem of knowledge and the connected questions of truth and error. The realism of Nyāya, which recognises complete difference (*bheda*) between the object (*viśaya*) and subject (*viśayin*) or between the known object (*jñeya*) and the cognising knowledge (*jñāna*) has inevitably to face the problem of truth and error and to suggest some solution which may be consistent with the Nyāya theory. If the *jñeya* should be wholly different from *jñāna*, how is the gulf between these two real factors to be bridged over, seeing that they are fundamentally different? How is knowledge possible at all? Knowledge is a real factor and its object is also a real factor existing independently of

A PRIMER OF INDIAN LOGIC [PART III]

(*viśeṣyatā*) of the former is presented as correlated with the adjunctness (*prakāratā*) of the latter. This definition would be applicable to cases of erroneous cognition like 'this is silver' (*idam rajatam*), where nacre is mistaken for silver; and it also excludes cases of valid group-cognition (*samūhā-lambanāpramā*) like 'these are silver and nacre' (*ime rajatasya kṛtī*), where both silver and nacre are seen as *saṁvṛtā* not confounded with each other.

In this connection, it is desirable to say a few words about the way in which the Nyāya theorist solves the problem of knowledge and the connected questions of truth and error. The realism of Nyāya, which recognises complete difference (*bheda*) between the object (*viśaya*) and subject (*viśayin*) or between the known object (*jñeya*) and the cognising knowledge (*jñāna*) has inevitably to face the problem of truth and error and to suggest some solution which may be consistent with the Nyāya theory. If the *jñeya* should be wholly different from *jñāna*, how is the gulf between these two real factors to be bridged over, seeing that they are fundamentally different? How is knowledge possible at all? Knowledge is a real factor and its object is also a real factor existing independently of



of objective reality, while there is real difficulty in accounting for the difference between truth and error, or valid cognition and erroneous cognition, consistent by with the realistic standpoint of Nyāya metaphysics, not to speak of the difficulties involved in the Nyāya theory of external relation. In a valid cognition like 'this is silver' (*idam rajatam*), where silver is seen correctly as silver, the Naiyāyika contends that its objective content exactly corresponds to the external realities represented by the attribute 'silverness', the thing possessing that attribute *viz.*, silver, and their relation of inherence (*samavāya*). It should be remembered here that according to Nyāya epistemology, the objective content of a cognition is not contained in cognition but exists outside it and it is called 'content' only in the sense that the relation of object and subject (*viśaya* and *viśayin*) connects it with *jñāna*. In a valid cognition, the exact correspondence between *jñāna* and *jñeya*, as already explained, consists in the correct correlation of the phases of *viśayaviśayibhāva*, *viz.*, adjunctness (*prakāratā*), substantiveness (*viśeṣyatā*) and relationness (*samsargatā*). In an erroneous cognition like 'this is silver' (*idam rajatam*), where nacre (*śukti* = mother of pearl) is mistaken for

of objective reality, while there is real difficulty in accounting for the difference between truth and error, or valid cognition and erroneous cognition, consistent by with the realistic standpoint of Nyāya metaphysics, not to speak of the difficulties involved in the Nyāya theory of external relation. In a valid cognition like 'this is silver' (*idam rajatam*), where silver is seen correctly as silver, the Naiyāyika contends that its objective content exactly corresponds to the external realities represented by the attribute 'silverness', the thing possessing that attribute *viz.*, silver, and their relation of inherence (*samavāya*). It should be remembered here that according to Nyāya epistemology, the objective content of a cognition is not contained in cognition but exists outside it and it is called 'content' only in the sense that the relation of object and subject (*viśaya* and *viśayin*) connects it with *jñāna*. In a valid cognition, the exact correspondence between *jñāna* and *jñeya*, as already explained, consists in the correct correlation of the phases of *viśayaviśayibhāva*, *viz.*, adjunctness (*prakāratā*), substantiveness (*viśeṣyatā*) and relationness (*samsargatā*). In an erroneous cognition like 'this is silver' (*idam rajatam*), where nacre (*śukti* = mother of pearl) is mistaken for

ed either through some defect in sight or in the particular situation in which the visual perception arises. The visual perception of nacre as 'this' (*idam*) arises in the ordinary way, through *laukika-sannikarṣa* or through the normal sense-relation of contact between the sense and the object seen. The real silverness (*rajatatva*), which belongs to the real silver existing elsewhere, is presented in this visual perception as the attribute of nacre seen as 'idam' in a general form; neither the real *rajata* nor the real *rajatatva* could be said to be connected with the sense of sight through normal sense-relation (*laukikasannikarṣa*); and without *sannikarṣa* (sense-relation) being established between the sense-organ concerned and the object to be perceived, perception cannot arise. So, the Naiyāyikas hold that the real silver and silverness come to be connected with the sense of sight through an extra-normal type of sense-relation (*alaukikasannikarṣa*) which is called *jñānalakṣaṇapratyāsatti* (sense-relation represented by cognition). The details relating to the different kinds of extra-normal sense-relation causing extra-normal perception will be fully explained under section 30, *infra*. In the present instance of erroneous cognition, features like

ed either through some defect in sight or in the particular situation in which the visual perception arises. The visual perception of nacre as 'this' (*idam*) arises in the ordinary way, through *laukika-sannikarṣa* or through the normal sense-relation of contact between the sense and the object seen. The real silverness (*rajatatva*), which belongs to the real silver existing elsewhere, is presented in this visual perception as the attribute of nacre seen as 'idam' in a general form; neither the real *rajata* nor the real *rajatatva* could be said to be connected with the sense of sight through normal sense-relation (*laukikasannikarṣa*); and without *sannikarṣa* (sense-relation) being established between the sense-organ concerned and the object to be perceived, perception cannot arise. So, the Naiyāyikas hold that the real silver and silverness come to be connected with the sense of sight through an extra-normal type of sense-relation (*alaukikasannikarṣa*) which is called *jñānalakṣaṇapratyāsatti* (sense-relation represented by cognition). The details relating to the different kinds of extra-normal sense-relation causing extra-normal perception will be fully explained under section 30, *infra*. In the present instance of erroneous cognition, features like

Students of Nyāya epistemology cannot adequately estimate the philosophical value of the Nyāya theory of *anyathākhyāti* without comparing it to some extent with the theories of *bhrama* (*khyātivāda*) propounded by the other schools of Indian philosophy. There are five theories of *bhrama*; viz., the theory of *self-apprehension* (*ātmakhyāti*), the theory of *non-being's apprehension* (*asatkhyāti*), the theory of *non-apprehension* (*akhyāti*), the theory of *misapprehension* (*anyathākhyāti*), and the theory of *indefinable's apprehension* (*anirvacanīyakhyāti*). The Yogācāra school of Buddhism, otherwise known as the Vijñānavāda school, explains erroneous cognition as consisting in the 'self', which is identical with consciousness, externalising itself in the form of objects like silver; all determinate cognitions of objects, according to the Yogācāra subjectivists, are erroneous; this theory of *bhrama* is called *ātmakhyātivāda* (theory of *self-apprehension*). The Nihilistic school of Buddhists, otherwise known as the Mādhyamaka school, explains *bhrama* as consisting in the cognition of a *non-being* (*asat*); in the case of the erroneous cognition 'this is silver' which arises where there is no silver, the object of the cognition is a non-being (*asat*); on the strength of

Students of Nyāya epistemology cannot adequately estimate the philosophical value of the Nyāya theory of *anyathākhyāti* without comparing it to some extent with the theories of *bhrama* (*khyātivāda*) propounded by the other schools of Indian philosophy. There are five theories of *bhrama*; viz., the theory of *self-apprehension* (*ātmakhyāti*), the theory of *non-being's apprehension* (*asatkhyāti*), the theory of *non-apprehension* (*akhyāti*), the theory of *misapprehension* (*anyathākhyāti*), and the theory of *indefinable's apprehension* (*anirvacanīyakhyāti*). The Yogācāra school of Buddhism, otherwise known as the Vijñānavāda school, explains erroneous cognition as consisting in the 'self', which is identical with consciousness, externalising itself in the form of objects like silver; all determinate cognitions of objects, according to the Yogācāra subjectivists, are erroneous; this theory of *bhrama* is called *ātmakhyātivāda* (theory of *self-apprehension*). The Nihilistic school of Buddhists, otherwise known as the Mādhyamaka school, explains *bhrama* as consisting in the cognition of a *non-being* (*asat*); in the case of the erroneous cognition 'this is silver' which arises where there is no silver, the object of the cognition is a non-being (*asat*); on the strength of

the yellow colour of the bilious matter which causes jaundice (*pittadravyapītimā*), the relation of the yellow colour to the bilious substance being missed. Thus in all cases of *bhrama*, two distinct cognitions—either a perception and a recollection or two perceptions—arise; their distinction is missed; and the difference between objects comes to be missed for the time being; as a result of such non-discrimination, volitional decision (*pravṛtti* or *yatna*) leading to voluntary activity arises; a voluntary activity with a view to seizing the object of *bhrama*, such as silver, follows; the knower in such cases, acting on his knowledge, realises through his experience that his activity has become futile, as he finds only nacre on the particular spot and no silver at all; and in those cases, in view of the fact that the volitional decision (*pravṛtti*) of the knower concerned leads to a futile activity, the cognitive antecedent of such a futile *pravṛtti* is technically called *bhrama*. It will be seen that, while the Prābhākaras are prepared to give a place to the term *bhrama* in their vocabulary, they maintain that all experiences are valid (*anubhūtiḥ pramā*) and that the so-called cases of *bhrama* are only undiscriminated jumbles of cognitions whose objects also happen to be undiscriminated for the



the yellow colour of the bilious matter which causes jaundice (*pittadravyapītimā*), the relation of the yellow colour to the bilious substance being missed. Thus in all cases of *bhrama*, two distinct cognitions—either a perception and a recollection or two perceptions—arise; their distinction is missed; and the difference between objects comes to be missed for the time being; as a result of such non-discrimination, volitional decision (*pravṛtti* or *yatna*) leading to voluntary activity arises; a voluntary activity with a view to seizing the object of *bhrama*, such as silver, follows; the knower in such cases, acting on his knowledge, realises through his experience that his activity has become futile, as he finds only nacre on the particular spot and no silver at all; and in those cases, in view of the fact that the volitional decision (*pravṛtti*) of the knower concerned leads to a futile activity, the cognitive antecedent of such a futile *pravṛtti* is technically called *bhrama*. It will be seen that, while the Prābhākaras are prepared to give a place to the term *bhrama* in their vocabulary, they maintain that all experiences are valid (*anubhūtiḥ pramā*) and that the so-called cases of *bhrama* are only undiscriminated jumbles of cognitions whose objects also happen to be undiscriminated for the

A PRIMER OF INDIAN LOGIC [PART III]

“There was no silver at all here in the past; it is not here now; and it will never be here in the future” (*nātra rajatam āsīt, asti, bhaviṣyati*), and it totally denies the existence of silver within the sphere of nacre in the past, the present and the future. The Vedāntins of the Viśiṣṭādvaita school adopt the Prābhākara theory of *akhyāti* with certain modifications and their version of *akhyāti* is known as ‘non-apprehension cum apprehension of reality’ (*akhyāti-samvalita-satkhyāti*). Śrī Rāmānuja and his followers hold that the object of *bhrama* is always real and there is strictly speaking no invalid cognition at all. In the perception of nacre as silver, it is the silver which is included among the component parts of nacre that is seen. They assume that substances which are similar must have some component parts in common, that silver is made up of parts of nacre and parts of silver and is called silver because the constituent parts represented by silver predominate; that in the constitution of nacre, likewise, the predominating part is represented by nacre and there is a small portion of silver; and that this small portion of silver it is, that happens to be seen when nacre is seen as silver. Thus according to the school of Śrī Rāmānuja, a person who errs in cognition really



“There was no silver at all here in the past; it is not here now; and it will never be here in the future” (*nātra rajatam āsīt, asti, bhaviṣyati*), and it totally denies the existence of silver within the sphere of nacre in the past, the present and the future. The Vedāntins of the Viśiṣṭādvaita school adopt the Prābhākara theory of *akhyāti* with certain modifications and their version of *akhyāti* is known as ‘non-apprehension cum apprehension of reality’ (*akhyāti-saṁvalita-satkhyāti*). Śrī Rāmānuja and his followers hold that the object of *bhrama* is always real and there is strictly speaking no invalid cognition at all. In the perception of nacre as silver, it is the silver which is included among the component parts of nacre that is seen. They assume that substances which are similar must have some component parts in common, that silver is made up of parts of nacre and parts of silver and is called silver because the constituent parts represented by silver predominate; that in the constitution of nacre, likewise, the predominating part is represented by nacre and there is a small portion of silver; and that this small portion of silver it is, that happens to be seen when nacre is seen as silver. Thus according to the school of Śrī Rāmānuja, a person who errs in cognition really

while adopting the theory of *anyathākhyāti*, find it necessary to accommodate themselves to the *asatkhyāti* theory, in holding that the *samsarga* element in the apprehension of nacre as silver and in such other cases is a non-being (*asat*). The Prābhākara realist sees the danger of compromise with the *asatkhyāti* on the one side, and on the other side, sees how the Nyāya theory that one reality is presented as another reality (*sadantaram sadantarātmanā gṛhyate*) would inevitably reduce itself to a variety of *asatkhyāti* for the obvious reason that one reality never exists (is *asat*) in the form of another reality. In order to avoid these difficulties the Prābhākara realist adopts the extreme theory of *akhyāti*. Though this is the only theory which could be said to be perfectly consistent with realism, it is not adequate to account for the volitional decision (*pravṛtti*) and the further activity that follows a *bhrama*. As Vācaspatimiśra points out in his *Tātparyaṭīkā* and *Bhāmātī*, (in the *akhyāti-vāda*) one could find as much justification in non-identification (*abhedāgraha*), for the two cognitions in cases of *bhrama* appearing as two cognitive units and consequently for the two objects in such cases appearing as different, as in non-discrimination



while adopting the theory of *anyathākhyāti*, find it necessary to accommodate themselves to the *asatkhyāti* theory, in holding that the *samsarga* element in the apprehension of nacre as silver and in such other cases is a non-being (*asat*). The Prābhākara realist sees the danger of compromise with the *asatkhyāti* on the one side, and on the other side, sees how the Nyāya theory that one reality is presented as another reality (*sadantaram sadantarātmanā gr̥hyate*) would inevitably reduce itself to a variety of *asatkhyāti* for the obvious reason that one reality never exists (is *asat*) in the form of another reality. In order to avoid these difficulties the Prābhākara realist adopts the extreme theory of *akhyāti*. Though this is the only theory which could be said to be perfectly consistent with realism, it is not adequate to account for the volitional decision (*pravṛtti*) and the further activity that follows a *bhrama*. As Vācaspatimiśra points out in his *Tātparyatīkā* and *Bhāmātī*, (in the *akhyāti-vāda*) one could find as much justification in non-identification (*abhedāgraha*), for the two cognitions in cases of *bhrama* appearing as two cognitive units and consequently for the two objects in such cases appearing as different, as in non-discrimination



mind and by the similarity between the object seen as 'this' and silver, undergoes transformation, with the result that silver comes into being also with the cognition of silver, which is but a cognitive modification of nescience (*śuktyavacchinnacailanyādhi-
ṣṭhitāvidyā rajatarūpeṇa rajatākāravṛttirūpeṇa ca
pariṇamate*); silver which thus comes into being has relative reality; it is said to be *anirvacanīya* in the sense that it does not admit of being definitely described as *sat* (being), or *asat* (non-being) or both; and it is also said to be *prātibhāsika* in the sense that it is coterminous with its presentation in cognition. It will thus be seen that the Advaitin's theory of *bhrama* regards it as a cognitive complex consisting of two cognitive factors, one of them being a *vṛtti* of *antaḥkāraṇa* and the other being a *vṛtti* of *avidyā*. According to this theory, the object of a *bhrama* is real in a relative sense and comes into being along with the *bhrama* and lasts as long as the *bhrama* lasts; and there is no need for accommodation to *asatkhyāti* or for any complication in the form of extra-normal (*alaukika*) sense-relation. That the Advaitins have no particular animus against the advocates of *anyathākhyātivāda* is evident from the way in which they are readily

168 A PRIMER OF INDIAN LOGIC [PART III]

mind and by the similarity between the object seen as 'this' and silver, undergoes transformation, with the result that silver comes into being also with the cognition of silver, which is but a cognitive modification of nescience (*śuktyavacchinnacaitanyādhi-
 śthitāvidyā rajatarūpeṇa rajatākāravṛttirūpeṇa ca
 pariṇamate*); silver which thus comes into being has relative reality; it is said to be *anirvācanīya* in the sense that it does not admit of being definitely described as *sat* (being), or *asat* (non-being) or both; and it is also said to be *prātibhāsika* in the sense that it is coterminous with its presentation in cognition. It will thus be seen that the Advaitin's theory of *bhrama* regards it as a cognitive complex consisting of two cognitive factors, one of them being a *vṛtti* of *antaḥkaraṇa* and the other being a *vṛtti* of *avidyā*. According to this theory, the object of a *bhrama* is real in a relative sense and comes into being along with the *bhrama* and lasts as long as the *bhrama* lasts; and there is no need for accommodation to *asatkhyāti* or for any complication in the form of extra-normal (*alaukika*) sense-relation. That the Advaitins have no particular animus against the advocates of *anyathākhyātivāda* is evident from the way in which they are readily

A PRIMER OF INDIAN LOGIC [PART III]

validity and invalidity of a cognition, or truth and error, or *prāmāṇya* and *aprāmāṇya* have to be accounted for and ascertained. The Naiyāyikas hold that validity and invalidity of cognitions are made out through extrinsic considerations and are brought about by extrinsic circumstances. In other words, according to the Naiyāyikas, validity and invalidity cannot be said to be intrinsically made out (*svatogrāhya*) or intrinsically brought about (*svatojanya*). Intrinsicity (*svatastva*) in respect of the knowledge of reality consists in reality being made out by every means by which the cognition having it is ascertained but not ascertained to be invalid. This definition of *svatogrāhyatva* is expressed thus in the technical language of Nyāya:—

“*prāmāṇyasya jñaptau svatastvam tadaprāmāṇyagrāhakayāvajjñānagrāhakasāmagrigrāhyatvam.*”

Whenever a person knows that he cognises and does not know for the moment that he errs, he also knows that he validly cognises:—this is the contention of the advocates of *svatogrāhyatva* or the theory that validity is intrinsically made out. Thus, if a person could become aware of the existence of a cognition in him in a hundred ways without becoming aware that that cognition is erroneous



validity and invalidity of a cognition, or truth and error, or *prāmāṇya* and *aprāmāṇya* have to be accounted for and ascertained. The Naiyāyikas hold that validity and invalidity of cognitions are made out through extrinsic considerations and are brought about by extrinsic circumstances. In other words, according to the Naiyāyikas, validity and invalidity cannot be said to be intrinsically made out (*svatogrāhya*) or intrinsically brought about (*svatojanya*). Intrinsicity (*svatastva*) in respect of the knowledge of reality consists in reality being made out by every means by which the cognition having it is ascertained but not ascertained to be invalid. This definition of *svatogrāhyatva* is expressed thus in the technical language of Nyāya:—
“*prāmāṇyasya jñaptau svatastvam tadaprāmāṇyāgrāhakayāvajjñānagrāhakasāmagrigrāhyatvam.*”

Whenever a person knows that he cognises and does not know for the moment that he errs, he also knows that he validly cognises:—this is the contention of the advocates of *svatogrāhyatva* or the theory that validity is intrinsically made out. Thus, if a person could become aware of the existence of a cognition in him in a hundred ways without becoming aware that that cognition is erroneous



The process of inference through which one's mind may pass in such cases is usually put in this form: "This cognition is valid, because it leads to a fruitful effort; any cognition that leads to a fruitful effort is valid, as another valid cognition already realised to be such in experience. (*idam jñānam pramā; saphalapravṛttijanakatvāt; yadyat saphalapravṛttijanakam tat jñānam pramā; yathā pramāntaram*). It should be borne in mind, in this connection, that causing fruitful effort is, according to Nyāya, the ground of inferring validity, while validity itself consists in the cognition in question cognising a thing as possessing an attribute which it really has. In that the Naiyāyikas make the ascertainment of the truth of a cognition dependent upon its agreement with its expected workings or, in other words, with the consequences which are expected to arise from it in the experience of the active subject, their view would appear to be closely similar to that of the modern pragmatist. However, they do not lose sight of the fact that pragmatism is only a method of ascertaining truth, that this method itself presupposes *truth* whose nature has to be explained independently of agreement with practical workings and that, if the truth presupposed

The process of inference through which one's mind may pass in such cases is usually put in this form: "This cognition is valid, because it leads to a fruitful effort; any cognition that leads to a fruitful effort is valid, as another valid cognition already realised to be such in experience. (*idam jñānam pramā; saphalapravṛttijanakatvāt; yadyat saphalapravṛttijanakam tat jñānam pramā; yathā pramāntaram*). It should be borne in mind, in this connection, that causing fruitful effort is, according to Nyāya, the ground of inferring validity, while validity itself consists in the cognition in question cognising a thing as possessing an attribute which it really has. In that the Naiyāyikas make the ascertainment of the truth of a cognition dependent upon its agreement with its expected workings or, in other words, with the consequences which are expected to arise from it in the experience of the active subject, their view would appear to be closely similar to that of the modern pragmatist. However, they do not lose sight of the fact that pragmatism is only a method of ascertaining truth, that this method itself presupposes *truth* whose nature has to be explained independently of agreement with practical workings and that, if the truth presupposed

174 A PRIMER OF INDIAN LOGIC [PART III]

employed by the Naiyāyikas. In respect of the question how validity and invalidity are brought about, the Nyāya theory is that they are brought about by certain extrinsic circumstances which, for the sake of convenience, are called *guṇas* (good features) and *doṣas* (defects); in other words the Nyāya theorists maintain *paratastva* (extrinsicity) in respect of the *utpatti* (production) of validity and invalidity of a cognition as well as in respect of their *jñāpti* (knowledge). For instance the validity of a perception is secured by the good feature (*guṇa*) consisting in the adequacy of the contact between the sense-organ concerned and its object; and its invalidity is the result of defects such as distance and some disease affecting the sense-organ.

It would be interesting to contrast the Nyāya theory of truth and error with the epistemological theories put forward by other schools of Indian philosophy about truth and error. The Sāṃkhya maintain that both validity and invalidity are intrinsically made out in the sense that it is by virtue of the reflection or proximity of the same *cit* (self-luminous consciousness), that the existence of a cognitive *vyakti* and its validity or invalidity are illuminated. Prābhākaras make no difference between *vyavasāya*

employed by the Naiyāyikas. In respect of the question how validity and invalidity are brought about, the Nyāya theory is that they are brought about by certain extrinsic circumstances which, for the sake of convenience, are called *guṇas* (good features) and *doṣas* (defects); in other words the Nyāya theorists maintain *paratastva* (extrinsicity) in respect of the *utpatti* (production) of validity and invalidity of a cognition as well as in respect of their *jñāpti* (knowledge). For instance the validity of a perception is secured by the good feature (*guṇa*) consisting in the adequacy of the contact between the sense-organ concerned and its object; and its invalidity is the result of defects such as distance and some disease affecting the sense-organ.

It would be interesting to contrast the Nyāya theory of truth and error with the epistemological theories put forward by other schools of Indian philosophy about truth and error. The Sāṃkhya maintain that both validity and invalidity are intrinsically made out in the sense that it is by virtue of the reflection or proximity of the same *cit* (self-luminous consciousness), that the existence of a cognitive *vytti* and its validity or invalidity are illuminated. Prābhākaras make no difference between *vyavasāya*

A PRIMER OF INDIAN LOGIC [PART III

tion (*anuvyavasāya*), but maintains, unlike a Naiyāyika, that the validity of *vyavasāya* is also presented in the same *anuvyavasāya*. It will thus be seen that Murārimsra is an advocate of the theory of the intrinsic-ality of validity (*pramātvam svato grhyate*). The Bauddhas, on the other hand, hold that all determinate knowledge (*savikalpaka*), in so far as one is conscious of it, is erroneous (*apramā*) and its *apramātva* is intrinsically made out; while, through inference, the validity (*pramātva*) of indeterminate cognition (*nirvikalpaka*) is extrinsically made out. The Buddhists thus advocate the theory of extrinsic-ality (*paratastvapakṣa*) in regard to validity and intrinsic-ality (*svatastvapakṣa*) in regard to invalidity. According to the Advaitins, the validity of a cognition is intrinsically made out in the sense that the witnessing inner spirit (*sākṣicaitanya*), which illuminates the valid cognitive *vṛtti*, also illuminates its validity (*pramātva*); and the invalidity (*apramātva*) of a cognitive *vṛtti* is inferred extrinsically, through the resultant effort becoming futile. In order to evaluate adequately the different theories of *pramā-tva* and *apramātva* set forth here, it is necessary to note that the Naiyāyikas would answer in the affirmative, the question—‘Is error possible in realism?’



tion (*anuvyavasāya*), but maintains, unlike a Naiyāyika, that the validity of *vyavasāya* is also presented in the same *anuvyavasāya*. It will thus be seen that Murārīmiśra is an advocate of the theory of the intrinsicity of validity (*pramātvam svato gr̥hyate*). The Bauddhas, on the other hand, hold that all determinate knowledge (*savikalpaka*), in so far as one is conscious of it, is erroneous (*apramā*) and its *apramātva* is intrinsically made out; while, through inference, the validity (*pramātva*) of indeterminate cognition (*nirvikalpaka*) is extrinsically made out. The Buddhists thus advocate the theory of extrinsicity (*paratastvapakṣa*) in regard to validity and intrinsicity (*svatastvapakṣa*) in regard to invalidity. According to the Advaitins, the validity of a cognition is intrinsically made out in the sense that the witnessing inner spirit (*sākṣicaitanya*), which illuminates the valid cognitive *vṛtti*, also illuminates its validity (*pramātva*); and the invalidity (*apramātva*) of a cognitive *vṛtti* is inferred extrinsically, through the resultant effort becoming futile. In order to evaluate adequately the different theories of *pramā-tva* and *apramātva* set forth here, it is necessary to note that the Naiyāyikas would answer in the affirmative, the question—‘Is error possible in realism?’

A PRIMER OF INDIAN LOGIC [PART III]

re-exhibited through a reminiscent impression, the former of these two features being stressed in particular; and this way of looking at *pramātva* would be quite in accord with the view that *apramātva* is made out extrinsically and *pramātva* intrinsically. It may also be noted, with advantage, that, in the Nyāya theory, *anuvyavasāya* (the subject-centred after-cognition) is regarded as self-luminous (*svapra-kāśa*) in the sense that it reveals itself along with the *vyavasāya* (the object-centred cognition in which the knower and knowledge are not presented); and that, in this respect, the Nyāya realist seeks to combine in a way his objectivism with an aspect of subjectivistic thought which is not incompatible with his realism. In this kind of compromise, a danger is lurking, as students of Advaita may easily see, and this danger consists in the manner in which the Nyāya view lends itself to *anuvyavasāya* being treated as a fragmentary appearance of the absolute reality represented by the absolute, self-luminous consciousness called *cit*.

An intelligent attempt to review synthetically all the theories of *bhrama* known to Indian philosophy will bring to light the fact that, in some manner or other, a negative element is involved



re-exhibited through a reminiscent impression, the former of these two features being stressed in particular; and this way of looking at *pramātva* would be quite in accord with the view that *apramātva* is made out extrinsically and *pramātva* intrinsically. It may also be noted, with advantage, that, in the Nyāya theory, *anuvyavasāya* (the subject-centred after-cognition) is regarded as self-luminous (*svapra-kāśa*) in the sense that it reveals itself along with the *vyavasāya* (the object-centred cognition in which the knower and knowledge are not presented); and that, in this respect, the Nyāya realist seeks to combine in a way his objectivism with an aspect of subjectivistic thought which is not incompatible with his realism. In this kind of compromise, a danger is lurking, as students of Advaita may easily see, and this danger consists in the manner in which the Nyāya view lends itself to *anuvyavasāya* being treated as a fragmentary appearance of the absolute reality represented by the absolute, self-luminous consciousness called *cit*.

An intelligent attempt to review synthetically all the theories of *bhrama* known to Indian philosophy will bring to light the fact that, in some manner or other, a negative element is involved

A PRIMER OF INDIAN LOGIC [PART III]

asatkhyāti; for, it should be remembered that *negativity* is only the other side of *relativity* and an aspect of *reality*. If one might be permitted here to indulge for a while in epigrammatising, one might well say that *yes* (*sat*) and *no* (*asat*) are the fulcra of all epistemology as they are of all metaphysics; that *yes* and *no* are but phases of the same reality; that all appearances are the offspring of a cross between *yes* and *no*; that it will be evident through the gemination of *yes* and *no*, that *yes* is *no* and *no* is *yes*; and that error (*bhrama*) is the antechamber of truth (*pramā*).

In subsections (f) and (g) of section 28 of the text, valid experience (*pramā*) and its instrument are each divided into four kinds. The term *pramāṇa* is used in this section in the sense of the efficient special cause or instrument (*karāṇa*) of valid experience. The word *pramāṇa* is sometimes used in the sense of valid experience (*pramā*), as for instance in the proposition '*idam rajatam iti jñānam pramā*' (this is silver—this is valid experience). In the word *pramāṇa*, the suffix *ana* denotes an instrument in the former case; and in the latter case, it denotes *bhāva* (the meaning of the root itself). The Indian materialists, called Cārvākas, recognise only one *pramāṇa viz.*, perception; the Bauddhas and the

asatkhyāti; for, it should be remembered that *negativity* is only the other side of *relativity* and an aspect of *reality*. If one might be permitted here to indulge for a while in epigrammatising, one might well say that *yes* (*sat*) and *no* (*asat*) are the fulcra of all epistemology as they are of all metaphysics; that *yes* and *no* are but phases of the same reality; that all appearances are the offspring of a cross between *yes* and *no*; that it will be evident through the gemination of *yes* and *no*, that *yes* is *no* and *no* is *yes*; and that error (*bhrama*) is the antechamber of truth (*pramā*).

In subsections (f) and (g) of section 28 of the text, valid experience (*pramā*) and its instrument are each divided into four kinds. The term *pramāṇa* is used in this section in the sense of the efficient special cause or instrument (*karaṇa*) of valid experience. The word *pramāṇa* is sometimes used in the sense of valid experience (*pramā*), as for instance in the proposition '*idam rajatam iti jñānam pramā*' (this is silver—this is valid experience). In the word *pramāṇa*, the suffix *ana* denotes an instrument in the former case; and in the latter case, it denotes *bhāva* (the meaning of the root itself). The Indian materialists, called Cārvākas, recognise only one *pramāṇa* viz., perception; the Bauddhas and the

uṣamāna (comparison or assimilation) and *śabda* (verbal testimony) under inference will be considered under appropriate heads in chapters II, III and IV, *infra*. The Naiyāyikas would bring presumptive testimony (*arthāpatti*) under *anumāna* (inference), and in some cases, under *śabda* (verbal testimony). A reference to pages 57 to 60 *supra* would show how the Naiyāyikas and Prābhākaras discard *anuṣalabdhi* (non-cognition) as a distinct *pramāṇa* and how the former reduce it to the level of a necessary accessory to *pratyakṣa*, in perceiving non-existence (*abhāva*). From chapter III it will be seen that the Nyāya view of *uṣamāna* is different in several respects from the Mīmāṃsaka's view of that *pramāṇa*.

It would be useful to consider here how the chief champions of *arthāpatti*, the Bhāṭṭas and Prābhākaras, maintain that it is a distinct *pramāṇa* and should not be brought under *anumāna* or *śabda* and on what grounds the Naiyāyikas refuse to recognise it as a distinct *pramāṇa*. According to the Bhāṭṭas, a knowledge of some fact which is unaccountable otherwise than by presumptively granting another fact is the instrument in the case of *arthāpatti* and the knowledge presumptively arrived at of the explanatory fact is the resultant cognition (*upapādyajñā-*



nam karaṇam, upapādakajñānam phalam). For instance, Devadatta is alive and not present in his house; this fact has to be accounted for (*upapādyā*), and cannot be accounted for otherwise than by presumptively granting that he must be present in some place outside his house (*bahissudbhāvakaḥ kalpanam vinā nopapadyate*). In the Bhāṭṭa view, the etymology of the word *arthāpatti* should be explained in two ways according as the word is taken in the sense of the instrumental cognition (*karaṇībhūta-jñāna*) or resultant cognition (*phalībhūtajñāna*). In the former case, the word is to be explained as denoting the knowledge of the fact which has to be accounted for and is otherwise unaccountable—the knowledge through which the needed explanatory fact is presumptively arrived at (*arthasya upapādakasya kalpanā yasyāḥ anyathānupapannasya upapādyasya pratīteḥ sā*). In the latter case, the word denotes the presumptive knowledge of the required explanatory circumstance (*arthasya upapādakasya kalpanā*). The Bhāṭṭas define *arthāpatti* to be a *pramāṇa* which consists in such a conflict between two valid cognitions, of which one takes a general form and the other takes a specific form of a conflicting character, as necessarily leads to the *presumptive* knowledge of



CSL

184 A PRIMER OF INDIAN LOGIC [PART III

a fact which removes the conflict. One of the stock examples given by them may be set forth thus:—It is known for certain that Caitra is alive; he must be present in some particular place; he is not present in his house; so, he is *presumably* present elsewhere. That Caitra is alive and present in some particular place is an established fact which is presented in the valid cognition taking a general form (*sādhāraṇa-pramāṇa*). That he is not present in his house is also an established fact which is presented in the valid cognition taking a specific form (*asādhāraṇa-pramāṇa*). The conflict between these two *pramāṇas* is not of the nature of the irreconcilable conflict which one notices between two contradictories; but it is of the nature of the conflict between a general affirmation and specific exclusion or between a general rule and an exception (*sāmānya* and *viśeṣa*). The Naiyāyikas contend that, in such cases, there is no real conflict at all since both the general affirmation and the specific exclusion may be true. The Bhāṭṭas point out in reply that conflict need not always be thoroughgoing as in the case of two contradictories, and that partial conflict is quite conceivable. In instances like the one cited above, there is real conflict, though of a partial nature and there is a stage

in the process of thought, at which the validity of the general affirmation is about to be completely imperilled. Caitra is alive and must be present somewhere; he is not present in his house; between this stage in thought and the final stage of presuming Caitra's presence outside his house, the truth of the pre-established fact of his being alive stands imperilled; thus, just at this intervening stage, there is the possibility of the knowledge that Caitra is alive being falsified; and the knower's conviction that this knowledge is true induces him to presume that Caitra is present outside his house and to prevent the possibility of falsification from becoming actualised. The Bhāṭṭas maintain in this manner that *arthāpatti*, as an instrument of valid cognition, is represented by a kind of conflict between a *sādhāraṇapramāṇa* and *asādhāraṇapramāṇa* (a valid cognition in the form of a general affirmation and a valid cognition in the form of a specific denial or exclusion), and that the resultant *pramā* arising from a consciousness of such a conflict is a *presumptive* type of knowledge. If the essential element in *arthāpatti* is that a certain fact like Caitra's being alive and not being present in his house is unaccountable without presuming another fact like Caitra's being outside his house,



could not *arthāpatti* be reduced to inference based on negative concomitance (*vyatirekyanumāna*)? This is what the Naiyāyikas ask. To get over this difficulty and to prevent *arthāpatti* being reduced to *anumāna*, the Prābhākaras urge that, in the example above referred to, it is not the possible falsification of the knowledge of Caitra being alive that constitutes the *pramāṇa* called *arthāpatti*; but it is the doubt regarding Caitra being alive (*jīvanasaṁśaya*), which arises from the conflict indicated above, that serves as the means of the resultant cognition which consists in the presumptive knowledge of Caitra being outside his house (*bahissat'vakalpanā*). While the strong point in the Prābhākara view of *arthāpatti* is that by treating *doubt* as the means of *presumption*, the *pramāṇa* in question is redeemed from the grip of *anumāna*, the weak spot in that view is that it exalts *doubt* to the rank of a *pramāṇa*; but the Prābhākaras, who hold that all experience is valid, would be quite willing to take this criticism as a compliment. The Bhāṭṭas meet the difficulty raised by the Naiyāyikas, by pointing out that the fundamental element in the mental process involved in *arthāpatti* is *presumption* through negative concomitance (*vyatirekavyāpti*),

while the fundamental element in the mental process called *anumāna* is *subsumption* under positive concomitance (*anvayavyāpti*); and that presumptive knowledge is a cognition of a distinct type belonging more to the side of imagination than to inference—belonging more to the sphere of *hypothesis* than to the sphere of inferentially established *thesis*, and it is articulated through propositions like ‘I presume’ and not through propositions like ‘I infer’. The Bhāṭṭas do not approve of the way in which the Prābhākaraś have exalted *doubt* in this connection to the rank of a *pramāṇa*. It is also pointed out by the Bhāṭṭas that there are certain cases of presumptive knowledge which do not admit of being reduced to inference. For instance, Devadatta is known to be present in the third house from mine; it is presumed that he is not present in *any other house*; this presumptive knowledge refuses to be reduced to inference; it would not be a sound argument to say that any place other than the third house from mine is not a place where Devadatta is, on the ground that such a place happens to be different from the third house from mine and on the analogy of the second house from mine; for with equal force it might be argued that any place other than the three houses which

have come within the scope of my observation is the place where Devadatta is present, on the ground that such a place is different from the two houses adjacent to the third house in which he is present and on the analogy of that third house. The Naiyāyikas would, however, explain their attitude in the matter by pointing out that, where one has to rely exclusively on negative concomitance (*vyatirekavyāpti*), one's mind has to pass inevitably through a stage of positive concomitance (*anvayavyāpti*) before it arrives at the resultant cognition; that presumptive knowledge (*kalpanā*) is really the anticipatory forestalling by the imaginative side of one's mind of what its somewhat slower ratiocinative side arrives at through inference; and that such foreshadowings through negative concomitance (*vyatirekavyāpti*) may well be brought under *anumāna* as a distinct variety of it and need not be exalted to the rank of a distinct *pramāṇa*. It should be remembered in this connection that the Bhāṭṭas maintain that what the Naiyāyikas would treat as inference based exclusively on negative examples and negative concomitance (*kevalavyatirekyanumāna*) is really no inference at all and demands a distinct place as *pramāṇa*, since it lacks the essential feature of inference—*viz.*, direct



subsumption to positive concomitance. The Bhāṭṭas realise the danger that this way of merging *vyatirekin* in *arthāpatti* may lead to the entire province of *anumāna* being swallowed up by the latter; and this fear they remove, by drawing attention to the fact that the inference of fire in a mountain from smoke, for instance, through the concomitance of fire and smoke in all observed cases, may be reduced to *arthāpatti*, and that the universal concomitance of all *smokes* and all fires, including the few observed and many *unobserved* cases, is a clear case of inference which cannot be accounted for by any *pramāṇa* other than *anumāna*. The Bhāṭṭas speak of two kinds of *arthāpatti*, *śrutārthāpatti* and *dṛṣṭārthāpatti*, according as the *upapādyā* (the fact requiring explanation) is made out through perception or through verbal testimony.

In section 28 of the text, four kinds of *pramāṇas* are referred to by Annambhaṭṭa. A *pramāṇa* is a *karāṇa* of a valid cognition (*pramā*). The concept of *karāṇa* has to be elucidated. The author proceeds to define a *karāṇa* in section 29 (a) and this leads on to a detailed consideration of the Nyāya view of causation.



T—(a) *Karāṇa* (efficient or instrumental cause) is a *special* cause.

(b)—The invariable antecedent of an effect is its cause.

(c)—An effect is the counter-correlative of its antecedent non-existence.

(d)—Cause is of three kinds, the three varieties being *inherent* cause, *non-inherent* cause, and *occasioning* cause.

(e)—That is called *inherent* cause, in which the effect *inheres* when it is produced. For instance, threads are the *inherent* cause of a cloth, and a cloth of its colour and such other qualities.

(f)—That is called *non-inherent* cause, which serves

as a cause, while co-inhering with its effect, or with the inherent cause of its effect. For instance, contact between threads is the *non-inherent* cause of cloth; and the colour of the threads is the non-inherent cause of the colour of the cloth.

(g)—*Occasioning* cause is a cause not coming under either of the above-mentioned kinds. For instance, the shuttle, the loom and such other things are the occasioning causes of cloth.

(h)—Of these three varieties of causes, only that is called an *efficient* or *instrumental* cause (*karāṇa*), which operates as *special* cause.

Annambhaṭṭa's definition of *karāṇa* uses the phrase *asūdhāraṇakāraṇa*. The terms *sādhāraṇa* (general) and *asūdhāraṇa* (special) are vague and have to be interpreted in relation to the context

192 A PRIMER OF INDIAN LOGIC [PART III

in which they are used. In the present context, *sādhāraṇakāraṇa* should be understood as a cause which is believed to be the common cause of all the conceivable effects in the world; and in this sense, according to the Nyāya theorists, *God, time, space* and such other things are general or common causes. *Asādhāraṇakāraṇa* should be understood as a cause which is not common to all the effects but is the special cause of particular effects or classes of effects; and in this sense, the component parts of a pot called *kapāla* (potsherd), the potter's stick and such other antecedents of a pot are its special causes.* The Naiyāyikas of the older school would define a *karāṇa* as a *special* and *mediate* cause (*asādhāraṇakāraṇa*), its mediacy consisting in its causal operation depending upon the co-operation of its intermediate effect in producing its final result. The intermediate factor which a *karāṇa* causes and which, in its turn, co-operates with the *karāṇa* in producing the final result is technically called *vyāpāra*. The term *vyāpāra*, in this restricted sense, should not be confounded with the same term used in the general sense of activity. In the restricted sense of the intermediate accessory of a *karāṇa*, a *vyāpāra* is defined in Sanskrit in this way—*lajjan-*

yaḥ tajjanyajanakaśca vyāpārah. (A *vyāpāra* is caused by a *kaṛaṇa*, and in association with it, causes its final effect). The full definition of a *kaṛaṇa*, according to the older Naiyāyikas, is this ;—*vyāpāravat asādhūraṇakāraṇam kārāṇam.* Annambhaṭṭa considers it expedient to adopt this definition. A potter's stick (*daṇḍa*) is *kaṛaṇa* in the sense that he uses it in revolving his wheel and it causes the pot through the rotation of the wheel (*cakrabhramāṇa*). A sense-organ is *pramāṇakāraṇa* in the sense that in association with its intermediate *vyāpāra*, which consists in its relation with the object (*saunikārṣa*), it produces a valid perception (*pratyakṣapramā*). The *navyā-naiyāyikas* are not in favour of this definition of *kaṛaṇa*. They would define it as a cause which is felt to be most necessary for having the effect, or for want of which it is believed that the effect is not produced though all the other causes are duly present :—(*phalāyogavyavacchinnaṁ kārāṇam kārāṇam*). Understood in this way, a potter's stick may be looked upon as *kaṛaṇa*; and likewise the rotation of the potter's wheel or even the contact between the component parts of a pot; in other words, according as the view-point varies, one may refer to

an *instrument* or to its intermediate function or even to *asamavāyikāraṇa*, as *kāraṇa*. The view of the later Naiyāyikas thus agrees with that of the *Vaiyākaraṇas* in respect of *kāraṇatva*, the Pāṇinīyan conception of a *kāraṇa* being that it is the most efficient of all the causes (*sādhakatamam kāraṇam*).

The Nyāya theorists define a cause (*kāraṇa*) as an invariable, immediate and indispensable antecedent of an effect. In Sanskrit, the full definition of a *kāraṇa* is set forth thus:—*kāryaniyatāvyavahitapūrvavṛtti ananyathāsiddham ca kāraṇam*. This definition insists upon three conditions being satisfied before an *antecedent* and a *consequent* could be connected as cause and effect. The antecedent should *immediately* precede the consequent; the two should be invariably co-existent with each other; and the antecedent in question should not be made out to be otherwise than indispensable. Mere co-existence or even invariable co-existence, as in the case of a pot and threads which may be found in the same place, or of earthness (*prthivīva*) and smell, is not causality. Immediate sequence is one of the essential elements in causality. The adjunct *ananyathāsiddha*, introduced in the definition of a cause, literally means 'not made out to be otherwise than indispen-

sable'. *Anyathā* means *otherwise*; *siddha* means *made out*; *otherwise*, in the context of causation, means *otherwise than indispensable*; *ananyathāsiddha*, as an adjunct to an antecedent factor, thus means 'not made out to be otherwise than indispensable' or 'not made out to be such as one can do without'. This use of the word *anyathāsiddha* should not be confounded with its use as an adjunct with reference to the result kept in view (*prayojana*). In phrases like *ananyathāsiddham prayojanam*, the result kept in view is described as something which cannot be accomplished otherwise than by particular means. With reference to a cause, *ananyathāsiddha* means, as already explained, an antecedent which is not made out to be otherwise than indispensable. *A* may be seen to be an invariable antecedent of *B*; still, one may be justified in thinking that it is not indispensable; in that case, *A* should not be regarded as cause of *B*. The Naiyāyikas have made an attempt to classify all the conceivable varieties of dispensable antecedents (*anyathāsiddha*) and usually recognise *five* classes of *dispensable antecedents*. A thing is made out to be invariable antecedent, only as determined by a delimiting adjunct; for instance, thread (*tantu*) is



196 A PRIMER OF INDIAN LOGIC [PART III]

an invariable antecedent of cloth, under the aspect of threadness (*tantulva*); this delimiting adjunct, though it finds a place in a definite conception of the causality referred to, does not participate in the creative process involved in such causality and is therefore felt to be dispensable in the sense that the causal process does not depend upon it; all such delimiting adjuncts of causeness (*kāranatāvacchedaka*) form the *first class* of *anyathāsiddha*. Invariable sequence between an antecedent and a consequent is generally made out through a knowledge of invariable concomitance between these two factors and between their negations—in other words, through a knowledge of *anvaya* and *vyatireka*; the colour of thread may be made out to be an invariable antecedent of cloth; but in this case, the *anvaya* and *vyatireka*, with reference to the colour of thread and cloth, cannot be made out independently of the invariable concomitance between thread and cloth on the positive and negative sides; the colour of thread is therefore *anyathāsiddha* with reference to cloth and is typical of the *second class* of dispensable antecedents. The *third class* of dispensable antecedents is represented by ether (*ākāśa*) in relation to a cloth; in this case, ether being eternal, it may be easily



shown to precede every effect; but it has to be conceived of as cause through the delimiting adjunct etherness (*ākāśatva*), which involves causal relation with sound; a thing which cannot be specifically thought of except as the cause of a certain effect may well be imagined to be a thing whose causal efficacy is completely pre-occupied in the direction of that effect and is no longer available in any other direction; and the feeling, therefore, in the case of *ākāśa*, is that it may be dispensed with in producing a cloth. The *fourth* variety of *anyathā-siddha* is represented by instances like the weaver's father with reference to a cloth woven by his son; only as the weaver's father, he is made out to be the invariable antecedent of the cloth, and not in his own right; and the feeling in that case is that one can do without the weaver's father in accounting for the production of a cloth. The *fifth* variety is represented by instances like an ass; it may so happen that in the case of an individual cloth, a certain ass precedes it; the particular ass necessarily turns out to be the invariable antecedent of the particular cloth; but it is felt that certain antecedents, other than the ass, which are known to be quite adequate to account for the pro-



duction of similar cloths, must be adequate in the case also of the particular cloth under reference; and so, the ass, in that case, is *anyathāsiddha*. Annambhaṭṭa, following Gaṅgeśopādhyāya, would combine the first two varieties into one, and likewise the third and fourth varieties, and would thus recognise only *three* classes of dispensable antecedents. In fact, later Naiyāyikas show that all these five varieties may be brought under the fifth variety; the principle underlying the fifth variety may be stated thus; while other invariable antecedents are made out to be quite necessary and adequate for producing similar effects belonging to the same class, or to be more accurate, while invariable antecedents of a relatively simpler type are made out to be quite necessary and adequate for producing such effects, in the case also of the effect in question, an invariable antecedent, which is not one of such antecedents felt to be necessary in the case of similar effects belonging to the same class, and which is less simple than such antecedents in respect of form (*śarīra*) or thought (*upasthiti*) or relation (*sambandha*) as the case may be, should be eliminated as a dispensable antecedent (*anyathāsiddha*); this principle holds good in all the five varieties of *anyathāsiddha*. Thus all the five



PERCEPTION

CSL
199

varieties may be brought under the comprehensive formula that invariable antecedents of a simpler type being quite adequate to account for the effect under reference, another antecedent, though invariable, has to be discarded as a dispensable antecedent (*anyathāsiddha*). This formula is expressed in this way in Nyāya literature—"laghuniyatapūrvavartinaiḥ kārṇyasambhave tadbhinnam anyathāsiddham." The adjunct *ananyathāsiddha* in the definition of a cause is intended to eliminate all such antecedents as one can reasonably feel one may well do without. After introducing the qualification 'not made out to be otherwise than indispensable' (*ananyathāsiddha*), it has to be considered whether the adjunct 'invariable' (*niyata*) is necessary. It would appear that most of the antecedents which are not invariably concomitant with the consequents in question can easily be eliminated as dispensable antecedents; for instance, an ass is neither an invariable nor an indispensable antecedent of a certain cloth. However, when the whole species of effects represented by cloth is sought to be connected as effect with some species as cause, the general formula of *anyathāsiddha* does not hold good; for, one can never say that the antecedents recognised as causing

A PRIMER OF INDIAN LOGIC [PART III]

another species of effects, like a jar, would be adequate to produce the species under reference, *viz.*, cloth; and in such cases, the only way in which accidental antecedents like an ass can be eliminated would be through the adjunct 'invariable' (*niyata*).

The conception of a *kārya* or an effect involves, according to the Nyāya theory of causation, the idea that the effect is invariably preceded by its antecedent non-existence. To say that a jar is produced means, in the Nyāya theory, that it is created for the first time and that it never existed before. Consistently with the creationistic view of causation (*ārambhavāda*), Annambhaṭṭa defines an effect as the counter-correlative of antecedent non-existence. In this connection students are advised to consider again the remarks about *prāgabhāva* in pages 48 to 50, part III, *supra*. Positive product (*bhāvakārya*) has three kinds of causes; the first being of the nature of component parts or of the nature of the substratum in which the effectuated quality or activity inheres and called 'inherent cause' (*samavāyikāraṇa*); the second being of the nature of the conjunction of parts producing the whole or of the nature of the quality or activity inhering in the component parts

or a substratum and producing a corresponding quality in the whole or disjunction in the same substratum, and called non-inherent cause (*asamavāyikāraṇa*); and the third being of the nature of agent and such other causes, not falling under either of the first two heads, and being called occasioning cause (*nimittakāraṇa*). It would be a mistake to suppose that all the *nimittas* are less important than the other two varieties. For, *kartā* or the intelligent agent, in whose absence the other causes become ineffectual, is technically a *nimitta*, but is, in a sense, the most important of all the varieties of causes.

That is a *samavāyikāraṇa* in which the effect *inheres* as it comes into being. The component parts (*avayavāḥ*), like threads, thus form the inherent cause of a composite substance (*avayavin*), like a cloth; and likewise a substance, of the quality or activity which is produced in it. To secure precision and avoid confusion, the delimiting adjuncts of *effectness* (*kāryatā*) and *causeness* (*kāraṇatā*)—*kāryatāvacchedakadharmā* and *kāraṇatāvacchedakadharmā*—should be specified in defining the relation of cause and effect in every case, as also the relations which determine the co-existence of the antecedent and the consequent in question—*kāryatāvacchedakasam-*



bandha and *kāraṇatāvacchedakasambandha*. Causality involves invariable co-existence between an antecedent and a consequent; their co-existence (*sāmānādhikaraṇya*) is their presence in the same place; when they are present in the same place, they should each be connected with the common substratum through a relation; the relation which connects the antecedent with the common substratum (*sāmānādhikaraṇa*) is known as the determining relation of *causeness* (*kāraṇatāvacchedakasambandha*); and the relation which connects the consequent with the same substratum is called the determining relation of *effectness* (*kāryatāvacchedakasambandha*). The exponents of the Nyāya-Vaiśeṣika doctrine of causation contend that, by a careful observation of the invariable concomitance between an antecedent and a consequent, as determined by particular delimiting adjuncts and relations, as also of the invariable concomitance between the negations of such antecedent and consequent—of *anvayasahacāra* and *vyatirekasahacāra*—the causal relation in every case can be accurately defined so as to obviate every conceivable hitch. In the case of a *samavāyikāraṇa*, like threads in relation to a cloth (*lantavaḥ paṭasya*), the simplest and the most

accurate way in which the causal relation may be defined is this:—‘the *cause-ness* delimited by *thread-ness* and by the relation of identity (*tantutvāvachinnā tādātmyasambandhāvachinnā ca kāraṇatā*) is correlated to the *effect-ness* delimited by *cloth-ness* and by the relation of inherence (*paṭatvāvachinnasamavāyasambandhāvachinnakāryatānirūpitā*). It will be seen here that, in every case of *samavāyikāraṇa*, the simplest way of defining the causal relation (*kāryakāraṇabhāva*) would be by referring to the cause itself as the common substratum (*samānādhikaraṇa*) in which the antecedent and the consequent under reference co-exist. In Nyāya definitions of causality, the common substratum kept in view is generally suppressed; and the student of Nyāya has to find it out first before trying to interpret such definitions. It should be noted here that the Nyāya conception of *samavāyikāraṇa*, while it includes what the Vedāntins call the *upādānakāraṇa* (material cause), is not exactly parallel to it; because, *upādāna* (material cause) is the substance which enters into the make-up of its product and this is true, in the Nyāya theory, only in the case of the component parts and their composite product, and not in the case of a substance and the quality or



activity arising in it, the cause and effect in the latter case representing fundamentally different categories. It should also be observed here that the phrase *inherent cause*, commonly used as the equivalent of *samavāyikāraṇa*, is somewhat misleading, in that it may lead one to wrongly suppose that it is the cause that inheres in the effect; but the fact is that the phrase here means 'a cause which is capable of producing an effect that inheres in it'. It may appear at first view that the phrase 'intimate cause' is a better equivalent; but it turns out to be more misleading when the corresponding phrase 'non-intimate cause' comes to be used as the equivalent of *asamavāyikāraṇa*, as may be seen presently from the next para.

The phrase *asamavāyikāraṇa* means a cause which, under no circumstance whatever, could be treated as a *samavāyikāraṇa* (inherent cause). Substances only can be treated as *samavāyikāraṇa* and they can never be treated as *asamavāyikāraṇa*. Qualities and activities only can be treated as *asamavāyikāraṇa*. While the two kinds of causes—*inherent cause (samavāyi)* and *non-inherent cause (asamavāyi)*—are absolutely exclusive of each other, the third kind—*viz., occasioning cause (nimitta-*

kāraṇa) includes causal factors which, while being the *nimitta* of certain effects, may well be the inherent or non-inherent causes of certain other effects, as the case may be. The phrase *non-inherent* cause used as the equivalent of *asamavāyikāraṇa* should not be taken to mean that the cause referred to does not inhere in any substratum, since every non-inherent cause, on the contrary, inheres somewhere; but this phrase should be understood to stand for, like its Sanskrit equivalent, a cause which, under no circumstance whatever, could be treated as *inherent* cause. In defining the causality of a non-inherent cause, the inherent cause of the effect in question should be kept in view as the common substratum (*samānādhikaraṇa*), inherence (*samavāya*) should be referred to as the relation determining the presence of the effect in question in the common substratum (*bhāvanatāvacchedakusambandha*), and either inherence or co-inherence (*samavāya* or *ekārthasamavāya*) should be referred to as the relation determining the presence of the cause in question in the common substratum (*kāraṇatāvacchedakasambandha*). The conjunction of threads (*tantusaṃyoga*) is the non-inherent cause of cloth; and in that case, the common substratum is thread; the relation connect-



206 A PRIMER OF INDIAN LOGIC [PART III

ing cloth with such substratum is inherence; and likewise, the relation connecting the conjunction of threads with such substratum is inherence; this is one type of non-inherent cause. Another type of non-inherent cause is to be found in the colour of the threads forming the component parts of a cloth; in this case, the colour of the threads is the non-inherent cause of the colour of the cloth; the common substratum is the cloth; the relation connecting the effect with such substratum is inherence and the relation connecting the cause with it is *co-inherence*. It should be remembered here that, according to the Nyāya-Vaiśeṣika system, the special qualities (*viśeṣaguṇāḥ*) of soul (*ātman*) should not be treated as non-inherent cause in the case of any effect, though the general definition of such cause holds good in the case of knowledge in relation to desire, of desire in relation to voluntary decision or effort (*yatna*) and in such other cases. The chief reason why the special qualities of soul should not be treated as non-inherent cause in the case of any effect is that, in all such cases, it would be simpler to treat the contact between the soul and the mind (*ātmamanassanyoga*) as non-inherent cause and in the case of any effect, more than one non-inherent

cause need not be recognised. In view of this, in the general definition of non-inherent cause given in the text, it is necessary to introduce the qualification that such cause is different from the special qualities of soul (*ātmaviśeṣa-guṇabhinnam*).

The atomic hypothesis of the Nyāya-Vaiśeṣika system and the creationistic view of causation maintained in that system are closely bound up with each other. The Nyāya-Vaiśeṣika theory of causation is known as *ārambhavāda* (creationism) as distinguished from the *pariṇāmavāda* (evolutionistic view of causation) of the Sāṃkhya. In the Nyāya-Vaiśeṣika system, 'to come into being' means 'to spring up at a certain point of time and not to have existed before'; for this reason, the Nyāya theory of causation is known as *asatkāryavāda*. The expression *asatkāryavāda*, according to Naiyāyikas, means 'the view that every effect is invariably preceded by its antecedent non-existence' and it should not be understood to imply that an effect arises out of nothing. On the contrary, according to the Nyāya theory, a positive product (*bhāvakārya*) is invariably preceded by a causal machinery, the full complement of which includes several positive antecedents and two negative

antecedents *viz.*, the antecedent negation of the effect in question (*kāryaprāgabhāva*) and the absence of counteracting causes (*pratibandhakābhāva*). The Naiyāyikas are anxious to repudiate the suggestion that their theory of *asatkāryavāda* implies that an effect may arise out of nothing; and they point out that antecedent negation (*prāgabhāva*) would be inconceivable without thinking of a suitable *anuyogin* (correlated substratum) and *pratiyogin* (counter-correlative), and that in the case of *prāgabhāva*, as in the case of annihilative negation (*dhvaṃsa*), while the effect itself represents the latter, the inherent cause (*samavāyikāraṇa*) represents the former. Invariable concomitance between an antecedent and a consequent (*niyatapūrvavaratitva*) and absence of such circumstances as would justify the idea that the antecedent in question is not indispensable (*ananyathāsiddhatva*)—these are the two essential elements in the Nyāya concept of causality. The former, according to the Naiyāyikas, is generally made out through a knowledge of the invariable sequence between two positive factors (*anvayasahacāra*) and of the invariable concomitance between the negations of those two factors (*vyatirekasahacāra*). The formula for *anvayasaha-*

cāra is usually stated thus:—"Whenever C precedes, E follows"; and that for *vyatirekasahacāra* thus :—"Whenever C does not precede, E does not follow." The latter formula is intended to serve as a corrective to the former and effectively eliminates the mistake which may arise through an exclusive adoption of the former formula and which consists in mere co-existence or sequence being taken for causality. There are certain cases where it is not possible to make out negative concomitance (*vyatirekasahacāra*); for instance, where a cause, like God, is *ex hypothesi* present everywhere and the invariable antecedent of every conceivable effect, the negative formula of *vyatireka* cannot possibly apply. In such cases, the affirmative formula of *anvaya* alone is available and depended upon. In all other cases, the Naiyāyikas insist that causality should be determined through an application of both the formulas of *anvaya* and *vyatireka*. Where these two formulas are applied to instances falling within the range of direct observation (*pratyakṣa*) and as a result causality is made out, it is said to be made out through *pratyakṣa*. Students of Western logic, who are familiar with the experimental methods formulated by Mill for determining causal relations, may be



able to find in the combination of the Nyāya formulas of *anvaya* and *vyatireka* a parallel to what is known as the *joint method of agreement and difference*. The Naiyāyikas are keenly alive to the difficulties in determining causality, which are brought about by cases of *plurality of causes* and *intermixture of effects*. They contend that, strictly speaking, there can be no plurality of causes or intermixture of effects. If fire appears to be the effect of straw (*trṇa*), or tinder-sticks (*araṇi*), or lens (*maṇi*), the fact is that the same effect is not produced from these three causes and the effect in each case has different properties. Such differences in effects may be apparent in certain cases and may be subtle and have to be noted with care in others. In a similar way, the effects of different causes may be mixed up; and in such cases, these effects should be carefully distinguished. The Naiyāyikas are never tired of reminding themselves and others of the need for carefully observing and making out the relation of invariable concomitance between particular classes of antecedents and consequents, as also between their negations. This need is embodied in Udayana's dictum—"Concerning the truth about the affirmative and the negative concomitance, one



should be particularly careful" (*tattve yatnavatā bhāvyaṃ anvaya-vyatirekayoḥ*.) It is contended by the Naiyāyikas that our experience of several things as existing only during a particular period of time and never existing before that time—in other words, as being *kādācitka* in their nature—cannot be satisfactorily explained except by assuming causal relation between such things and certain antecedents. The causal factors also—some of them at least—should themselves be occasional (*kādācitka*) and contingent, for the reason that, otherwise, the prior non-existence of the effects in question cannot be accounted for. This would mean that a beginningless chain of causes and effects should be admitted; and the Naiyāyikas do not hesitate to say that the stream of causes and effects is beginningless (*kārya-kāraṇa-pravāho'nādiḥ*), for the simple reason that the starting point, if any, of the causal stream lies far beyond human ken.

30

T—(a) Of those *pramāṇas*, perceptive instrument (*pratyakṣa*) is the means of perception.

(b) Perception is the cognition which is produced through sense-organ coming into relation with an object. It is of two kinds:—indeterminate and determinate.

(c) Indeterminate perception is a cognition which does not involve any attribute or adjunct (*prakāra*).

(d) Determinate perception is a cognition which involves an attribute or adjunct. It is embodied in propositions like "This is *Ḍiṭṭha*", "This is a *Brāhmaṇa*", "This is black", "This is a cook".

The definition of preceptive instrument (*pratyaṅśapramāṇa*) is based on Gautama's *sūtra* I. i. 4, which runs thus:—*indriyārthasannikarṣotpañnam jñānam avyapadeśyam avyabhicāri vyavasāyātma-kam pratyakṣam*". This *sūtra* may be rendered thus:—"Perception is cognition which arises

CH. I] PERCEPTION 213

through sense-organ coming into relation with object, and which is *non-verbal*, *unerring* and of the nature of *indubious* knowledge'. The Sūtra-kāra is evidently defining valid perception (*pratyaṅkṣapramā*) in order to definitely indicate the nature of the instrument of valid perception (*pratyaṅkṣapramāṇa*). According to the earlier interpretation of this *sūtra*, as given in Vātsyāyana's *bhāṣya*, the adjunct 'unerring' (*avyabhicāri*) excludes erroneous perception; and the adjunct 'indubious' (*vyavasāyātmaka*) excludes doubt. The adjunct 'non-verbal' (*avyapadeśya*) in the *sūtra* is understood in various ways by different scholiasts. Some of the old scholiasts take this adjunct to mean 'not coming within the scope of expressions referring to objects' (*śabdakarmatāmāpannam na bhavati yat*); and in this sense, it differentiates perception as described by the expressions referring to objects from perception as it arises, the former having become objectified as *prameya* and thus ceased to belong to the subjective sphere of *pramāṇa* (valid cognition). Some other Naiyāyikas of an early school would take the adjunct 'non-verbal' (*avyapadeśya*) in the sense of 'not being caused by word in association with sense-organ' (*anubhayaja* or *śabdākṣobhayaja*—

bhinna); and, in this sense, it should be understood as excluding cases where the meaning of a word is made out through the perceptual observation of the way in which an object is referred to by that word, or in other words, cases where a word is first made out to be significative of a certain object that is actually being perceived by a sense-organ. In such cases, they hold that the cognition in question should be brought under verbal cognition (*śābda*) and not under perception. Another set of early Naiyāyikas, (like Jayantabhaṭṭa) would take *avyapadeśya* in the sense of *aśābda* (non-verbal) and would explain its purpose as consisting in saving indeterminate perception (*savikalpaka*) from being merged in verbal cognition (*śābda*) on the ground that the cognitive process involved in such perception invariably results through the operation of a sense-organ in association with the recollection of a scheme of words with which the knower happens to be familiar. Vācaspatimiśra and several others who follow him would take the words *avyapadeśya* (non-verbal) and *vyavaśāyātmaka* (definite and determinate) as referring to the two kinds of perception—viz., indeterminate (*nirvikalpaka*) and determinate (*savikalpaka*). They maintain that the former adjunct (*avyapadeśya*)



refutes the view of the grammatical philosophers who refuse to recognise *nirvikalpa* and hold that knowledge is impossible except though some language and no object is cognised by itself and without being associated with the word signifying it. (*Na so'sli pratyayo loke yatra śaḥdo na bhāsate*). The latter adjunct (*vyavasāyātmika*), they further maintain, refutes the Buddhist doctrine that indeterminate perception (*nirvikalpa*) is the only genuine type of valid perception and that all determinate cognitions (*savikalpa*) are illusive. The last explanation given by Vācaspatimiśra and his followers is generally accepted by later Naiyāyikas and Gautama's *sūtra* dealing with perception (I. i. 4) is believed to presuppose both the types of perception—determinate (*savikalpa*) and indeterminate (*nirvikalpa*).

What exactly is the nature of indeterminate perception and how does it differ from determinate perception? The answer suggested by Annambhaṭṭa's definitions of *nirvikalpa* and *savikalpa*, which follow Gaṅgeśa's view, may be explained in this way. In the first place, it should be remembered that the Nyāya distinction of erroneous cognition (*bhrama*) and valid cognition (*pramā*), which



is intended to apply only to cognitions leading to some activity (*pravartaka*), holds good only in the case of determinate cognitions and cannot have any reference to indeterminate cognitions. The relation of object and subject (*viśayaviśayibhāva*) involved in a determinate cognition is a definite complex consisting of three correlated phases—adjunctness (*prakāratā*), substantiveness (*viśeṣyatā*) and relationness (*saṁsargatā*). In an indeterminate cognition, on the other hand, there is the relation of object and subject; and while a thing, its attribute such as a generic feature (*jāti*) and their relation are presented in it, they are not presented in a specific manner in their respective forms as a qualified substantive (*viśeṣya*), as a qualifying attribute (*viśeṣaṇa*) and as a relation of a definite type (*saṁsarga*). Such indeterminate cognitions have only to be inferentially arrived at through determinate cognitions, on the basis of the observed causal relation between a cognition of a certain attribute (*viśeṣaṇajñāna*) and a complex cognition of a thing as having that attribute (*viśiṣṭajñāna*). On this ground, the determinate cognition of a jar, for instance, one cannot possibly have without previously having an indeterminate cognition in which the substance in question, its

generic attribute and even their relation are presented in a vague and undifferentiated form. Indeterminate cognitions are therefore said to be *atīndriya* (beyond the scope of any sense), while determinate cognitions are generally perceived by mental perception (*mānasapratyakṣa*) and presented in *anuvyavasāya*. It may also be noted that a *nirvikalpaka* can never be directly expressed in a proposition and that every proposition, according to Naiyāyikas, embodies and conveys a determinate cognition (*saṃsargāvagāhijñāna* or *savikalpaka*).

The grammatical philosophers (*śābdikas*) as already stated, refuse to recognise *nirvikalpaka*. All the other philosophers recognise the distinction between *nirvikalpaka* and *savikalpaka* in one form or other. In the first place, the Buddhists hold that the *nirvikalpaka* is the only form of valid perception and it cognises the absolute, unrelated, momentary existence called *svalakṣaṇa* (the mere *thing-in-itself*); while the determinate cognitions (*savikalpaka*) are illusive in that they involve wholly fictitious fabrications (*vikalpa* or *kalpanā*), which usually take the forms of a name (*nāma*), a generic attribute, (*jāti*), a quality (*guṇa*), an activity (*kriyā*) and a substance (*dravya*). The Advaitins hold that indeterminate



218 A PRIMER OF INDIAN LOGIC [PART III

cognition (*nirvikalpaka*) may arise from propositions like 'This is that Devadatta' (*so'yam devadattaḥ*) and 'That thou art' (*tat tvam asi*): and that the absolute existence alone (*sanmātram*), which is identical with *Brahman*, is presented in indeterminate cognitions (*nirvikalpaka*). The Mīmāṃsaka view of *nirvikalpaka* is that it is an indeterminate perception which consists in the direct and simple awareness of an individual object (*vyakti*) and its generic attribute (*jāti*) which arises immediately after the sense-organ comes into relation with them; and that it misses the definite feature of the *jāti* as being common to several individuals belonging to a particular class and the specific character of the *vyakti* as being different from others—*i.e.*, the element of *anuvṛtti* in the former case and of *vyāvṛtti* in the latter case. This is closely similar to the old Vaiśeṣika view of *nirvikalpaka*. Praśastapāda describes indeterminate perception as simple awareness (*ālōcanamātra*) and Kumārila, in his description of it, uses the same expression and compares it to the *unverbalised dumb experience* of a child or a dumb person. Indeterminate perception is only to be inferred like any other cognition, in the view of Bhāṭṭas; while it is presented in itself along with

the knower and the known object, as in the case of other cognitions, according to the Prābhākara. The Vedāntins of the Viśiṣṭādvaita school adopt the Prābhākara view of indeterminate perception and maintain that every cognition, however simple it may be, involves a substantive, an attribute and their relation; that both *sāmānya* (generic attribute) and *viśeṣa* (the individual *vyakti*) are presented in *nirvikalpaka* along with difference in the form of the individual object (*vyaktisvarūpa*); and that, at the stage of *nirvikalpaka*, the knower does not realise that the generic attribute presented in his knowledge is common to all the individuals belonging to the same class and that these individuals are different from the individuals belonging to a different class and he is not, therefore, in a position to articulate his indeterminate perception through verbal expression.

The Advaitic view of *nirvikalpaka*—that the absolute existent (*Sattā = Brahman*) is the only thing which is presented in it and that the highest form of truth-realisation which leads to final emancipation is a *nirvikalpaka*—is an inevitable development of the doctrine of *nirvikalpaka* as adopted by the exponents of the Nyāya-Vaiśeṣika system. The Nyāya-



220 A PRIMER OF INDIAN LOGIC [PART III

Vaiśeṣika realists have shown how a permanent reality, and not a momentary isolated 'this' (*svalakṣaṇa* or *thing-in-itself*) as in the case of the Buddhist theory of *nirvikalpaka*, may be presented in indeterminate perception; and it has thus become easy for the Advaitins to push the Nyāya theory of *nirvikalpaka* to its logical conclusion and to maintain that the true *nirvikalpaka* is one in which *Brahman*, the only absolute and permanent reality, is presented. This is, indeed, one of the several instances in which the Advaitic Monist effectively uses a weapon made in the Nyāya forge against its maker himself to annihilate his pluralistic universe. Jayantabhaṭṭa, an authoritative exponent of Nyāya, observes in a significant manner that the only way in which one may get out of the mess which various Indian theorists have made of the content of *nirvikalpaka* would be by adopting the view that the same reality that is presented in *savikalpaka* is presented in the *nirvikalpaka*, the only difference between them being that the former is invariably bound up with a linguistic scheme or verbal image while the latter is not and cannot be specifically articulated through any verbal expression. The subjoined extracts from the *Nyāyamañjarī* (*Vizaya*.

S. S. page 99) deserve a careful consideration in this connection:—

*“Tasmād ya eva vastvātmā savikalpasya gocarah;
 Sa eva nirvikalpasya śabdollekhavivarjitah.
 Kimātmako'sāviti ced yad yadā pratibhāsate;
 Vastupramitayaścaiva praṣṭavyū na tu vādinah.
 Kvaccijjātiḥ kvacid-dravyam kvaccitkarma kvacid-
 guṇah;
 Yadeva savikalpena tadevānena grhyate.
 Iha śabdānusandhānamātramabhyadhikam
 param.”*

The Nyāya-Vaiśeṣika definition of *pratyakṣa* (sense-perception) generally insists that sense-data form its essential feature and that it is invariably the result of a special type of relation called *sannikarṣa* between a sense and an object. This definition takes into account only perceptual experiences which are produced from certain causes and does not hold good in the case of the eternal omniscience which is also called *pratyakṣa* and which is ascribed to God. Strictly speaking, the etymology of the word *pratyakṣa* would support its application only to perceptual experiences arising from the senses. However, usage has extended the term to all cognitions which are characterised by immediacy.

222 A PRIMER OF INDIAN LOGIC [PART III]

God's omniscience has the highest degree of immediacy conceivable. So, in order to cover *nitya-pratyakṣa* also, perception is defined as a cognition which does not arise through the *instrumentality* of another cognition; (*jñānākaraṇakam jñānam pratyakṣam*). It should be remembered that, though a determinate perception arises from an indeterminate perception, the latter does not operate as *karana* (efficient instrument).

It would be desirable to consider here whether perception, in the sense in which it is used in the Nyāya-Vaiśeṣika system, may correctly be called *intuition*. Without misapprehension, the term *intuition* may be used with reference to perception (*pratyakṣa*), only in the sense that it possesses a comparatively greater degree of immediacy, as compared with non-perceptual cognitions. If *intuition* should be taken to absolutely exclude mediacy of any kind whatever, the *pratyakṣa* of the Nyāya system, which arises through a special kind of relation between an object and a sense-organ, cannot be called intuition. In the strict sense of the term *intuition*, it may be proper to use it only with reference to what is sometimes called *pratibhā* or the innate capacity of the mind to immediately

perceive certain things; and it may also be appropriate to describe the Advaitic realisation of the one absolute reality as *intuition*, in view of the fact that it results from the intuitive faculty of mind to perceive reality coming to have a full, free and efficient play after the required preliminary discipline of studying and understanding (*śravaṇa*), reflective thinking (*manana*) and constant meditation (*nididhyāsana*). In fact, in the Nyāya system, all knowledge is mediate in a sense, except the eternal knowledge ascribed to God, even indeterminate perception depending upon the mediation of a special kind of relation between sense-organ and object (*indriyārthasannikarṣa*)

The Bhāṭṭa Mīmāṃsakas adopt, for all practical purposes, the Nyāya definition of perception and would, like Naiyāyikas, lay special stress on *indriyārthasannikarṣa*. The Prābhākaraś, on the other hand, define perception as 'direct awareness' (*sākṣāt prātīh*); and according to them, even recollection, inference and such other cognitions, usually considered non-perceptual in their character, are really perceptual on the subjective side, in so far as they themselves and the knower are concerned (*svāmīṣe jñātrāmīṣe ca*), though they are non-



perceptual on the objective side, in so far as their objects are concerned (*viṣayāmśe*). The Advaitic theory of perception rightly points out that the Nyāya view gives undue prominence to *indriyārthasannikarṣa* and belittles the importance of the element of immediacy which ought to be treated as the essential element in *pratyakṣa*. The Advaitins seek to remedy this defect by treating sense-relation as an antecedent necessary only for certain kinds of perception and by insisting that immediacy consisting in *subject-object-unity* is the essential feature of all perceptual forms of experience, and not sense-relation. Consistently with usage in language, the Advaitins distinguish the *pratyakṣatva* (perceptuality) of a cognition from the *pratyakṣatva* (perceivedness) of an object. They describe cognition (*jñāna*) as *pratyakṣa* (perceptual experience), when it comes to be *unified* for the time being with its object, in the sense that consciousness as conditioned by cognition (*pramāṇacaitanya* or *vṛttiyavacchinnacaitanya*) becomes equated with consciousness as conditioned by object (*viṣayacaitanya*). In a similar way, they describe an object (*viṣaya*) as *pratyakṣa* (perceived), when the knower (*pramāṇīcāitanya*) becomes equated with object or consciousness as conditioned by



object (*viṣayacaitanya*). It may be noticed here that the idea that immediacy in the sense of *subject-object-unity* forms the essential element in *pratyakṣa* has turned out to be wholly foreign to Nyāya realism, mainly because the relational scheme on which the realistic edifice of Nyāya is erected consists entirely of external relations, and because the *object-subject-relation* (*viṣayaviṣayibhāva*), in particular, is conceived of as being entirely external in its character, chiefly with a view to keeping the dangerous idealist always at a safe distance.

30 (e).

T—The sense-relation (*sannikarṣa*) which causes a perceptual cognition is of six kinds—*viz.*, contact, inherence in what has come into contact, inherence in what is inherent in a thing which has come in contact, inherence, inherence in an inherent thing and adjunct-substantive relation.

When a jar is perceived by the sense of sight, the sense-relation is 'contact'.



When the colour of a jar is seen, the sense-relation is 'inherence in a thing which has come into contact', the jar, in that case, having come into contact with the visual sense and colour being connected with the jar through the relation of inherence. When colourness (*rūpatva*) in the colour of a jar is seen, the sense-relation is 'inherence in what is inherent in a thing which has come into contact'; for, in that case, the jar has come into contact with the visual sense, the colour of the jar inheres in it and colourness inheres in colour.

When sound is perceived by the sense of hearing, 'inherence' is the sense-relation; for, the ether bound within the auricular orifice



is the auditory sense, sound is a quality of ether, and the relation between a quality and its substratum is inherence. When soundness (*śabdātva*) is perceived by the auditory sense, the sense-relation is 'inherence in a thing which inheres'; for, *soundness* inheres in sound which inheres in the auditory sense.

In the perception of non-existence, the *adjunct-substantive-relation* is the sense-relation; for in the case of the visual perception which takes the form—
“The seat of the non-existence of jar is the floor”,
the ‘non-existence of jar’ is an adjunct to the floor with which the visual sense has come into contact.

Thus the cognition which arises from one or the other of these six sense-relations is perception; and sense-organ is its efficient instrument (*karana*). Therefore, the senses constitute the efficient instrument of perceptual experience. (*pratyakṣaḥ pramāṇa*).

[THUS ENDS THE CHAPTER ON PERCEPTION.]

In the foregoing portion of the text, the scheme of *sannikarṣa* adopted by the Naiyāyikas is set forth. The term *sannikarṣa* is used in a technical sense; it is not a mere relation, nor is it exactly contact, for the word 'contact' is generally taken to be equivalent to *samyoga*. It would be correct to describe *sannikarṣa* as a special type of sense-relation which determines and constitutes the extent of the *perceptive reach* or *range* of the sense-organs. In Nyāya literature, the term *sannikarṣa* is generally used in this technical sense. The scheme of *sannikarṣa* set forth above relates to normal perception (*laukika-pratyakṣa*) and comprises normal sense-relations (*laukikasannikarṣa*). The Nyāya-Vaiśeṣika theory

regarding the nature and constitution of the sense-organs (*indriya*) is already set forth on pages 83, 84 and 88 *supra*. According to the Naiyāyikas, the visual sense (*cakṣuḥ*), constituted as it is by light, travels to the spot where the visible objects happen to be and visualise them and it is therefore said to be *prāpyakārin*; the remaining senses are said be *aprāpyakārin*, in the sense that they do not leave their place but, remaining where they are, they preceive the objects which come within their reach. Some early exponents of the Nyāya-Vaiśeṣika system, like Jayantabhaṭṭa and Śrīdhara, hold that all the senses are *prāpyakārin*, in the sense that they function with reference to objects within their reach, it being immaterial whether a sense reaches an object or an object reaches a sense. *Samavāya* (inherence) is recognised as a distinct type of *sannikarṣa* in order to account for the auditory perception of sound. The Nyāya theory of the perception of sound (*śabdapratyakṣa*) is already set forth and explained on pages 130 to 134 *supra*. The Nyāya view regarding the perception of non-existence is that, through the help of effectual non-cognition (*yogyānupalabdhi*), a sense-organ perceives the non-existence of an object which is perceptible

230 A PRIMER OF INDIAN LOGIC [PART III]

to it. As a rule, a sense-organ which perceives an object can also perceive its *jāti* (generic attribute) and its *abhāva* (non-existence). The Nyāya view regarding this matter is usually expressed in this Sanskrit dictum—“*Yenendriyeṇa yā vyaktiḥ gr̥hyate, tanniṣṭhā jātiḥ tadabhāvaśca tenendriyeṇaiva gr̥hyate*”. It is necessary, in this connection again, to refer to pages 57 and 58 *supra*. The relation of *viśeṣaṇa-viśeṣyabhāva*, which is recognised as the *sannikarṣa* connecting non-existence with a sense-organ, is, in fact, an indirect relation involving one or the other of the other *sannikarṣas*. For instance, in the visual perception of the non-existence of jar (*ghaṭābhāva*) as adjunct of the empty floor (*bhūtala*), the visual sense comes into contact (*saṁyoga*) with the empty floor with which the non-existence of jar is connected as adjunct; so, the complete chain of *sannikarṣa*, in this case, is not mere *viśeṣaṇatā*, but *cakṣussam̐yuktaviśeṣaṇatā* (being adjunct to a thing with which the visual sense has come into contact).

In the case of inner perception through the inner sense (*antarindriya*) called *mānas*, it is necessary to recognise three distinct sense-relations:—*viz.*, *saṁyoga*, *saṁyuktasamavāya* and *saṁyukta-*

samavelasamavāya, in order to account respectively for the mental perception (*mānasapratyakṣa*) of the soul (*ātman*), of the cognition in it and of cognitionness (*jñānatva*). In connection with the auditory perception of sound (*śabda*) and soundness (*śabdatva*), it is necessary to recognise two distinct sense-relations :—viz., *samavāya* and *samaveta-samavāya*. The sense-relation of *viśeṣaṇaviśeṣya-bhāva* is necessary to account for the perception of non-existence. Would it be necessary to use the first three sense-relations (*saṁyoga* etc.) in accounting for external perception through the external senses other than the auditory sense ? No substance which does not possess at least the minimum degree of *mahattva* (largeness) can be perceived by an external sense; and in the case of every external perception of substance or quality other than sound, association with *mahattva* is a necessary condition. So, in all cases of external perception, except auditory perception, one has to take into account only composite substances (*avayavin*), from a triad (*tryaṇuka*) upward. It would appear that, in such cases, the first two sense-relations may be dispensed with and the third—*saṁyuktasamavelasamavāya*—would be quite adequate to account for any per-



232 A PRIMER OF INDIAN LOGIC [PART III

ception. For instance, the visual perception of a triad of earth (*pr̥thivītryaṇuka*) or its colour (*rūpa*) or its colourness (*rūpatva*) can easily be accounted for by taking *saṁyuktasamavētasamavāya* as the sense-relation; this chain should be understood in the first case (*tryaṇuka*) as consisting of contact between the visual sense and the atoms, the inherence of dyads in those atoms and the inherence of the triad in those dyads; the first link in this chain, in the second case (*rūpa*), is contact between dyads and the visual sense; and in the third case (*rūpatva*), the first link in this chain is contact between the triad and the visual sense. To the above question, the Nyāya theorists reply that the first three sense-relations are indispensable and explain their necessity in this way. Take, for instance, visual perception; the conditions of visual perception such as *udbhūtarūpa* (perceptible colour) and *mahattva* (largeness) should be regarded as the co-existing determinants (*avacchedaka*) of contact with the visual sense (*indriyasamīyoga*); it would not do if they are associated in some manner with the object visualised; otherwise, the earthness (*pr̥thivītvā*) in the atoms of earth and the blueness (*nīlatva*) in the blue colour belonging to an atom of earth should

be visualised, the former (*pr̥thivīva*) being associated with largeness (*mahattva*) in a jar and the latter (*nīlatva*) being associated in some manner with largeness through the blue colour of a jar; or otherwise, as a result of indirect association with *mahattva* and *udbhūtarūpa* in a jar, the *jāti* called *sattā* should be visualised in air (*vāyu*) as well as its touch (*sparśa*); in order to avoid these absurdities, *mahattva* and such other conditions in the case of visual perception should be referred to as *avacchedaka* (co-existing determinant) of contact with the visual sense (*cakṣussamyoga*), in all cases of visual perception; in these circumstances, it becomes necessary to leave entirely out of account contact between the visual sense and atoms or dyads; thus, *samyoga*, *samyuktasamavāya* and *samyuktasamavetasamavāya* are shown to be indispensable in accounting for external perception of a substance (*dravya*), its quality (*guṇa*) and the generic attribute (*jāti*) in the quality.

The scheme of six sense-relations explained above relates only to cases of normal perception (*laukikapratyakṣa*) and these sense-relations are called *laukikasannikarṣāḥ* (normal sense-relations). In the case of perception through the external



senses, the complete scheme of relation necessary to bring about perceptual experience consists of contact between soul and mind, mind and sense-organ and sense-organ and object (*ātmā manasā saṃyujyate, mana indriyeṇa, indriyam arthena*). The first of these three factors—viz., contact between mind and soul (*ālmamanassasāmyoga*)—is a general condition of knowledge (*jñānasāmānya*). In cases of *mānasapratyakṣa* (inner perception through the internal sense-organ *manas*), this general condition itself (*ālmamanassasāmyoga*) assumes the specific form of sense-relation (*indriyārthasannikarṣa*).

The Naiyāyikas also recognise three types of super-normal perception (*alaukikapratyakṣa*), as arising from three kinds of super-normal sense-relation (*alaukikasannikarṣa*), viz.,—the relation of sense-bound generality (*sāmānyalakṣaṇasannikarṣa*), the relation of sense-bound cognition (*jñānalakṣaṇasannikarṣa*) and the relation of yogic power (*yogajasannikarṣa*). In Nyāya literature, the word *pratyāsatti* is also used in this context, as the equivalent of *sannikarṣa*. The co-existence of smoke and fire is seen in a hearth; this visual perception relates only to the particular smoke and particular

fire; a doubt arises as to whether the co-existence between smoke and fire is invariable or not and takes the form "Is smoke co-existent with the non-existence of fire anywhere or not?" (*dhūmo vahnivya-bhicārī na vā*); such a doubt relates to all smokes and all fires; only a particular smoke and a particular fire happen to be seen in the hearth; the perceptual doubt referred to arises through the visual sense and presupposes the visual perception of all smokes—past, present and future, in the hearth and elsewhere (*dhūmasāmānyacākṣuṣam*); the normal sense-relations of contact (*saṁyoga*) and inherence in the thing in contact (*saṁyuktasamavāya*) are established between the visual sense on the one side, and on the other side, the particular smoke and smokeness (*dhūmatva*) in it; no normal sense-relation can be shown to connect the visual sense with all the smokes; in this situation what happens is that the visual perception of the generic feature, smokeness (*dhūmatva*), which is present in the particular smoke normally connected with the visual sense and which is common to all smokes, serves as the super-normal link (*alaukikasannikarṣa*) through which all the unobserved smokes are, in the first instance, connected with the parti-

cular smoke actually observed, and through the latter with the visual sense which has already come into relation with it in a normal way. Thus *sāmānyalakṣaṇasannikarṣa* is a super-normal sense-relation which immensely extends the perceptive reach of a sense-organ and brings whole classes of perceptible objects within its scope when only particular individuals of a class have actually come within its reach. The word *sāmānya* in this context means any common attribute (*samānadharmā*) and not necessarily a *jāti*; even a jar, for instance, may be treated as the *sāmānya* of all the places having a jar. The earlier view is that the phrase *sāmānyalakṣaṇa* should be understood in the sense 'consisting in *sāmānya*' (*sāmānyasvarūpa*) and that this variety of super-normal sense-relation consists in the 'common attribute presented as adjunct (*prakāra*) in the cognition of a substantive (*viśeṣya*) which has come into normal relation with the sense-organ. (*Indriyasambaddhaviśeṣyakajñāna-prakāribhūtam sāmānyam sannikarṣaḥ*). This view is defective; for, it does not cover, for instance, the super-normal perception of all the places having a particular jar which has ceased to exist and which is remembered as the common attribute

(*samānadharmā*) of all such places. In that case, one visualises through the super-normal (*sāmānyalakṣaṇa*) sense-relation all the places having the particular jar which no longer exists (*tadghaṭavataḥ sarvān pradeśān*), while seeing in the normal way only one of such places without the jar and while recollecting the particular jar previously seen in that place in the normal way. *Tadghaṭa* (the particular jar) is the common feature in that instance; if *sāmānya* itself were to be understood as constituting the needed sense-relation, *sāmānyalakṣaṇasannikarṣa* would not be available there, for the reason that the particular jar representing the *sāmānya* no longer exists; but if cognition of *sāmānya* (*sāmānyajñāna*) should be treated as *sannikarṣa*, the required sense relation in the form of recollection (*sāmānyasmarāṇa*) would be available. For these reasons, Naiyāyikas of the later school take the phrase *sāmānyalakṣaṇa* to mean 'having *sāmānya* as object', the word *lakṣaṇa* being taken in the sense of object (*viśaya*); and they hold that it is cognition of *sāmānya* (*sāmānyajñāna*) that constitutes the super-normal relation in question. It should be remembered in this connection that while (*sāmānyajñāna* avails as super-normal sense-relation in

238 A PRIMER OF INDIAN LOGIC [PART III

internal perception (*mānasapratyakṣa*) under all circumstances, it avails as such in external perception (*bāhyapratyakṣa*) only when the conditions necessary for bringing about the normal perception of the *sāmānya* in question are present. (*Tadindriya-jātaddharmabodhāsāmagryapekṣitā*.) For instance, one can have a super-normal inner perception (*alaukikamānasapratyakṣa*) of all smokes through the recollection of smokeness (*dhūmatva*), even in darkness; but, in darkness, one can never have a super-normal visual perception (*alaukikacāksuṣa*) of all smokes through the *sāmānyajñāna* consisting in the recollection of smokeness (*dhūmatvasmarāṇa*). It may also be stated here that one could not become omniscient (*sarvajñā*) for the mere reason that one could have super-normal perception of all knowable things (*prameya*) through the cognition of their common feature knowableness (*prameyatva*), since omniscience (*sārvajñya*) consists in a detailed and full knowledge of all things and not in a general knowledge of them.

239. A person *sees* sandal; his sense of smell does not function for the moment and his sense of sight alone functions; he *sees* not only sandal but also its fragrance; his visual perception assumes the form



“the sandal is fragrant” (*surabhi candanam*), and he is conscious of the fact that he is seeing the fragrant sandal. In cases like this, no normal sense-relation (*laukikasannikarṣa*) between the visual sense and fragrance can be recognised and the presentation of fragrance (*saurabha*) in visual perception as an adjunct of sandal has to be accounted for by means of the super-normal sense-relation (*alaukikasannikarṣa*), which consists in the recollection of fragrance smelt in the sandal on a previous occasion. This variety of super-normal sense-relation is called *jñānalakṣaṇasannikarṣa*. By means of *sāmānyajñāna* (cognition of a common attribute) representing *sāmānyalakṣaṇasannikarṣa*, it would be possible to account for fragrance being brought within the scope of the visual perception of sandal, the required sense-relation being found in the cognition of fragrantness (*saurabhatva*) — the generic feature of fragrance. But the presentation of *saurabhatva* in the visual perception of sandal cannot be accounted for by means of *sāmānyalakṣaṇasannikarṣa*, since *saurabhatva* is a *jāti* and is therefore presented in cognition as adjunct by itself (*svarūpataḥ*) and not as delimited by any attribute. In this case, it becomes unavoidably

necessary to recognise *jñānalakṣaṇasannikarṣa* as distinct from *sāmānyalakṣaṇa*. Further, where a person mistakes nacre for silver in visual perception and has the *anuvyavāsāya*—‘I see silver’, silverness (*rajatatva*) is presented in the inner consciousness of visual perception through *jñānalakṣaṇa*, and not through *sāmānyalakṣaṇa*; for, in the latter case, the generic attribute, whose cognition is proposed to be treated as *sannikarṣa*, should be present in the substantive (*viśeṣya*) actually perceived, and in the present instance, silverness is not present in the nacre which is seen. On these grounds, the Naiyāyikas maintain that *jñānalakṣaṇa* should be taken to form a distinct type of super-normal *sannikarṣa*. They also hold, on the strength of the evidence furnished by the *Yogaśāstra*, that the super-normal capacity, which the mind (*manas*) acquires through the yogic practice, constitutes the third variety of *alaukikasannikarṣa* described as *yogajadharmalakṣaṇa*. This variety of super-normal sense-relation enables any sense to reach any object.

The Nyāya theory of *alaukikasannikarṣa* seeks to account for certain cognitions which really stand on the border line between ordinary perceptual

cognitions and non-perceptual cognitions and would appear to be more akin to the former than to the latter. The Mīmāṃsakas and the Advaitins are not in favour of this theory and refuse to recognise any special type of *pratyakṣa* known as *alaukikapratyakṣa*. These opponents of the Nyāya theory argue thus. Universal judgments relating to smokes and fires in general terms are the result of the synthesis which a thinker's mind is capable of making; this synthesis is sometimes effected through a negative process and sometimes through a positive process; in the case of a negative synthesis, particular individuals only are observed and brought into relation with each other as determined by certain generic features, the individualities of the individuals being entirely ignored for the moment; such a negative synthesis may well be brought under normal perceptual process (*laukikapratyakṣa*). In positive synthesis, a generalisation of all the conceivable individuals, without ignoring their individualities, is definitely contemplated and is effectuated by the thinker's mind passing from particulars to universals; the mental process involved in such a positive synthesis is essentially one of inference. In cases like the visual perception of sandal as fragrant (*surabhi candanam*), one may see



easily a jumble of visual perception of sandal and recollection of fragrance through association of ideas. Even in the case of yogic perception, what happens, in fact, is that the normal reach of the mind comes to be immensely extended by yogic powers through the great potentialities of the mind becoming actualised in experience; and all instances of yogic perception may be accounted for, without the help of the theory of super-normal sense-relation, either as *mānasapratyakṣa* (inner perception), or as vivid recollection of the past, or as vivid imagination of future possibilities. The Mīmāṃsā theorists discard the doctrine of yogic perception altogether.

However, it should be observed here that the Nyāya theory of *alaukikapratyakṣa* (super-normal perception) rests on reasons which should not be lightly brushed aside and which are worthy of very careful consideration. In the first place, it may be noted that, in every case which a Naiyāyika would bring under the super-normal variety of perception, the mediacy which is characteristic of non-perceptual cognitions is entirely missing and the immediacy which is characteristic of perceptual cognitions is invariably felt to be present. In cases



of external perception, where cognition of a *sāmānya* or cognition of some other kind is treated as *sannikarṣa*, the mind is entirely subordinated to a sense and if certain impressions derived from previous experience get mixed up with perceptual elements, such impressions come to be divested, for the time being, of their non-perceptual character and invested with a sense-bound, perceptual garb. The inner consciousness (*anuvyavasāya*) of disciplined minds, which takes a form like this "I see a *fragrant sandal*" (*surabhi candanam paśyāmi*) is certainly an evidence which the Naiyāyikas feel bound to respect and rely upon, in this connection.

CHAPTER II.

INFERENCE.

31

(a) *Anumāna* (Inference) is the efficient instrument (*karāṇa*) of inferential cognition.

(b) Inferential cognition is a cognition which arises from subsumptive reflection (*parāmarśa*).

(c) *Parāmarśa* (subsumptive reflection) is a cognition which cognises the presence of the invariably concomitant factor denoted by the middle term (*probans*) in the thing denoted by the minor term. For instance, the cognition, "This mountain has smoke which is invariably con-

comitant with fire " is a presumptive reflection; and the cognition resulting from it and taking the form "mountain has fire" is inferential cognition.

(d) "Wherever there is smoke there is fire"—this type of invariable concomitance is *vyāpti* (co-extension).

(e) Subject-adjunctness (*pakṣadharmatā*) consists in the invariable concomitant (*vyāpya*) being present in things like a mountain (denoted by *pakṣa* or the minor term).

Anumāna, as its etymological sense indicates, is *after-proof*. It is after-proof in the sense that it uses the knowledge derived from perception (*pratyakṣa*) or verbal testimony (*āgama*) and helps the mind to march on further and add to its knowledge. As Vātsyāyana puts it, it is equivalent to *anvīkṣā*; and the Nyāya system is called *ānvīkṣikī*, for the reason that its immediate and chief aim is to elucidate the

nature of *anumāna* or *anvīkṣā* as a *pramāṇa*. (*Pratyakṣāgamāśritam anumānam; sā anvīkṣā; tayā pravartata ityanvīkṣikī nyāyavidyā nyāyaśāstram.*) Seeing that verbal testimony is not recognised as a distinct *pramāṇa* by the Bauddhas and the Vaiśeṣikas, the Nyāya writers prefer to consider *śabda* at the end and rightly proceed to consider *anumāna* immediately after *pratyakṣa*.

• It would be interesting to note here how the Nyāya realist deals with the criticism that all knowledge may, in a sense, be brought under inference and that even perceptual experience may be brought under inference. It may well be contended that, in the visual experience of a composite structure like a horse, only certain parts of the animal come into relation with the sense of sight and several parts do not, in fact, come into relation with the sense; and that, in such cases, the experience of the whole, of which we become conscious, must be taken as inference. Gautama himself refers to this contention in II—1—31 and indicates how this difficulty may be met by using the Nyāya theory that the composite whole (*avayavin*) is entirely different from its parts (*avayavāḥ*). The Nyāya theorists claim that their

conception of parts and whole as entirely different entities has as its chief advantage the preservation of the province of *pratyakṣa* from being wholly swallowed up in the province of *anumāna*.

In the case of every *pramāṇa*, the *karāṇa* (special or efficient instrument), the *vyāpāra* (intermediate cause) and the *phala* (final result) should be carefully distinguished. In the case of *anumāna* (instrument of inferential experience) the knowledge of co-extension (*vyāptijñāna*) is *karāṇa*; subsumptive reflection (*parāmarśa*) is *vyāpāra*; and inferential experience (*anumiti*) is *phala*.

Students of Nyāya, before they proceed to study the Chapter on *anumāna*, should start with a clear conception of the meanings of the technical terms *pakṣa*, *sādhya* and *hetu* or *sādhana*. They are usually rendered respectively by the English equivalents—*minor* term, *major* term and *middle* term. But it should be remembered here that these English terms have primary reference to certain terms constituting syllogistic expression : whereas, in Sanskrit Nyāya, the term denoting *pakṣa* corresponds to the *minor* term, the term *pakṣa* itself standing for the substantive with reference to which



something has to be inferred or inferentially predicated; the term denoting *sādhya* corresponds to the *major* term, the term *sādhya* itself standing for the thing that is sought to be inferred or inferentially predicated with reference to *pakṣa*; and the term denoting *hetu* or *sādhana* corresponds to the *middle* term, the term *hetu* or *sādhana* itself standing for the reason or ground which is invariably concomitant with what is sought to be inferred and whose knowledge leads to inference. Thus, one may see in the Indian terminology itself evidence of a fundamental difference in the way in which the topic of inference is treated in Indian logic as compared with the way in which European tradition deals with that topic—such difference consisting in greater stress being laid on the material aspects of inference by the exponents of the Nyāya-Vaiśeṣika system and undue stress being laid by European tradition on the formal side of syllogistic expression.

Annambhaṭṭa defines *anumiti* as a cognition produced by subsumptive reflection (*parāmarśa*). This definition, as it is, may be applied even to a perceptual experience following a doubt and arising from a subsumptive reflection. With reference to a man standing at a distance, a doubt may arise in

twilight, as to whether he is a man or a post. As one approaches the object, the cognition "This object has hands and such other features as are found invariably associated with humanity" (*ṣaṭvavyūpyakārādīmān ayam*) arises; and immediately follows the perceptual experience "This is a man" (*ayam puruṣaḥ*). Such cases of *saṁśayottaraṣṭratyakṣa* (perceptual decision following a doubt) and arising from the reflective perception of certain particulars (*viśeṣaparāmarśa*) are not instances of *anumiti* and have to be excluded by the adjunct 'in association with the *pakṣatā*' (*pakṣatāsahakṛta*) so that the complete definition of *anumiti* will be this—"Anumiti is a cognition which is produced by subsumptive reflection in association with *subjectness* (*pakṣatā*)".

What is *pakṣatā* (*subjectness*)? The earlier school of Nyāya understood *subjectness* as consisting in 'doubt regarding the presence of *probandum*' (*sādhyaśandeha*)—or, in other words, understood a *pakṣa* to be the substantive with reference to which one doubts whether one may correctly predicate something or not. This view of *pakṣatā* ignores the fact that *sādhyaśandeha* (doubt regarding *probandum*) is not a necessary condition of inference and that a

A PRIMER OF INDIAN LOGIC [PART III]

person who has actually seen clouds on the sky may also infer their presence from their peal of thunder. The later Naiyāyikas seek to remove this defect in the earlier definition of *pakṣatā* and suggest a modified definition which may be stated thus:—“*Pakṣatā* (subjectness) amounts to the absence of such indubious knowledge of the *probandum* as is associated with the absence of a desire to establish the *probandum*” (*siṣādhayiṣāvirahaviśiṣṭasiddhyabhāvaḥ pakṣatā*). In experience, it is found that indubious knowledge of the *probandum* (*sādhyaśiddhi*) prevents inference unless there is a positive desire to arrive at the same result through inference. *Sādhyaśiddhi* is thus a counteracting agent preventing *anumiti* (*anumitipratibandhaka*) and *siṣādhayiṣā* neutralises the influence of the counteracting agent and is therefore *uttejaka*. *Pakṣatā* thus reduces itself to non-existence of such counteracting agent as is not associated with the absence of the neutralising agent (*uttejakābhāvaviśiṣṭam yat pratibandhakam tadabhāvaḥ*). When the Naiyāyikas include *pakṣatā* in the causal equipment necessary for *anumiti*, they do not assume anything unusual, but are simply applying to the specific effect, *anumiti*, the general principle that *uttejakābhāvaviśiṣṭapratibandhaka*.



bandhakābhāva is one of the things making up the causal complement of an effect. It must be remembered that universal *sādhyasiddhi* in every conceivable instance of *pakṣa* prevents the inference of the same *sādhyā* in some of the *pakṣas* as also in all *pakṣas*; whereas partial *sādhyasiddhi* in some *pakṣas* prevents only the inference of the same *sādhyā* in all *pakṣas*. Universal *sādhyasiddhi* is technically described as *pakṣatāvacchedakūvacchedena sādhyasiddhi* and may be embodied in a proposition like this—"All S is P". Inference of the same *sādhyā* in all *pakṣas* is likewise described as *pakṣatāvacchedakāvacchedena anumiti* and embodied in a proposition like this—"All S is P". "Some S is P"—a proposition of this type embodies partial *sādhyasiddhi*, which is technically described as *pakṣatāvacchedakasāmānādhikarāṇyena sādhyasiddhi*. An inference which may be embodied in a proposition like "Some S is P" is prevented only by universal *sādhyasiddhi*. It should also be remembered that, when the conditions necessary for having the perception of a certain object are present along with those necessary for inferring the same object, only the perception of that object arises and not its inference; but in cases where the conditions necessary for perceiv-

252 A PRIMER OF INDIAN LOGIC [PART III]

ing an object are present along with those required for inferring another object, inference would arise and not perception.

The Naiyāyikas insist that, in every case of inference, quick or slow, inference for oneself or inference for others, subsumptive reflection (*parāmarśa*) is an indispensable antecedent and should, therefore, be treated as cause of *anumiti*. *Parāmarśa* is a complex cognition which arises from a combination of the knowledge of invariable concomitance (*vyūptijñāna*) and that of the presence of the reason (*hetu*) in the subject (*pakṣa*)—technically known as *pakṣadharmatājñāna*. In the stock example of inference—"The hill has fire; because it has smoke", the *parāmarśa* takes the form—"The hill has smoke which is invariably concomitant with fire" (*vahnivyāpyadhūmavān parvataḥ*); and it is contended by the Naiyāyikas that, in the absence of such a *parāmarśa*, *anumiti* does not arise. This cognitive complex called *parāmarśa* is also known as *liṅga-parāmarśa* or *tṛtīyaliṅga-parāmarśa* (the third cognition of the reason). The cognition of the presence of the *liṅga* (reason) in the subject (*pakṣa*) may be said to be the first *liṅga-parāmarśa*; the cognition of the invariable relation between *liṅga*



and *sādhya* is the second *liṅga-parāmarśa*; and the complex cognition which arises from these two cognitions is the third *liṅga-parāmarśa*.

The Mīmāṃsakas and the Vedāntins who follow them hold that the complex cognition called *parāmarśa* is not indispensable for *anumiti*, though it may actually arise just before *anumiti* in many cases. In our experience, we are conscious of having *anumiti* directly after becoming aware of the presence of the *hetu* (reason) in the *pakṣa* (subject) and remembering *vyāpti* (invariable concomitance) and without any intervening *parāmarśa*. In such cases, the Naiyāyikas also cannot help recognising causal relation (*kāryakāraṇabhāva*) between *anumiti* on the one side and the two cognitions referred to on the other side (*vyāptijñāna* and *pakṣadharmatājñāna*); and in cases where *parāmarśa* intervenes, they should recognise another causal relation (*kāryakāraṇabhāva*) between *parāmarśa* and *anumiti*. Thus the Mīmāṃsakas argue and maintain that, in order to avoid this difficulty, it would be necessary to treat *anumiti* as the effect of *vyāptijñāna* and *pakṣadharmatājñāna* and to exclude *parāmarśa* from the causal complement of *anumiti*. The Naiyāyikas, however, point out that it would be

much simpler to connect every case of *anumiti* with *parāmarśa* as its cause and to assume that, even in cases where *anumiti* appears to arise directly from *vyāptijñāna* and *pakṣadharmatājñāna*, there is an intervening *parāmarśa* though one may not be conscious of it on account of the quick passage of the mind from the stage of *pakṣadharmatājñāna* to the stage of inference. The controversy between the Mīmāṃsakas and Naiyāyikas, as to whether *anumiti* should be taken as the effect of the two cognitions—*vyāptijñāna* and *pakṣadharmatājñāna* or as the effect of the complex cognition called *parāmarśa*, appears to hinge on the principle of parsimony (*lāghava*) and turns out to be a consideration of the greater or smaller degree of cumbersome-ness which one might notice in the Mīmāṃsaka's or the Naiyāyika's way of defining the causal relation between *anumiti* and its cause. However, a careful estimation of the arguments advanced by the Mīmāṃsakas and the Naiyāyikas would reveal the significance of the insistence in Nyāya on *parāmarśa* being treated as indispensable. If *subsumption* to a generalisation be the essential element in inference, it is obvious that inference of fire in a hill cannot arise from the perception of smoke in it,

until the particular smoke in the hill is *subsumed* under the generalisation involving *vyāpti* between smoke and fire; and the Naiyāyikas insist that subsumption is the essential feature of inference and insist therefore that every *anumiti* should be taken to be preceded by *parāmarśa*, which is but a subsumptive reflection subsuming the smoke in the hill under the pre-established *vyāpti*. The Bhāṭṭa Mīmāṃsakas, on the other hand, hold that it is the *subsultive*, rather than the *subsumptive*, passage of the mind from the observed relation of particulars to a certain unobserved particular, that characterises the the inferential process of thought; and this view accounts for their attitude towards *parāmarśa*. From the following exposition of *vyāpti*, the difference between the views of the Mīmāṃsakas and the Naiyāyikas would become further clarified.

What is *vyāpti*? Annambhaṭṭa's definition of *vyāpti* is that it consists in the *hetu* (reason or *probans*) being co-existent with the *sādhya* (*probandum* or the thing to be inferentially established), which is *pervasive* of the *hetu* (*hetuvyāpaka*). To be pervasive (*vyāpaka*), in the context of *anumiti*, means 'never being the counter-correlative (*prati-yogin*) of a negation (*abhāva*) which is co-existent

A PRIMER OF INDIAN LOGIC [PART III]

with *hetu*.' In an inference, where smoke is the *hetu* and fire is the *sādhya*, to say that there is *vyāpti* (invariable concomitance) between smoke and fire implies the following things, according to this definition. Firstly, it implies that fire and smoke co-exist in the particular form and through the particular relation, with reference to which they are intended to be treated as *hetu* and *sādhya* respectively, the particular form of *hetu* and *sādhya* being technically called *hetutāvacchedakadharma* and *sādhya-tāvacchedakadharma* and the particular relations intended to determine the co-existence of *hetu* and *sādhya* being technically known as *hetutāvacchedakasambandha* and *sādhya-tāvacchedakasambandha*. Secondly, it implies that, with reference to the same *hetutāvacchedakadharma*, *sādhya-tāvacchedakadharma*, *hetutāvacchedakasambandha* and *sādhya-tāvacchedakasambandha*, fire is never the counter-correlative (*pratiyogin*) of any negation which co-exists with smoke. Where fire in a hill is inferred from smoke, fire is *sādhya*, fireness (*vahnitva*) is said to be *sādhya-tāvacchedakadharma* in the sense that fire is proposed to be treated as *sādhya* in its general and universal form as fire, and not in any other form such as that of a substance

{*dravya*); smokeness (*dhūmatva*) is said to be *hetutāvacchedakadharmā* in the sense that smoke is proposed to be treated as *hetu* in its general and universal form as smoke, and not in any other form; and conjunction or contact (*saṁyoga*) is said to be *sādhyatāvacchedakasambandha*, as also *hetutāvacchedakasambandha*, in the sense that fire and smoke, in their respective form as *sādhyā* and *hetu*, are proposed to be treated as connected with *pakṣa* (subject), through the relation of contact, and not through any other relation such as inherence (*śamavāya*) or self-linking relation (*svarūpa*).

In later Nyāya literature, based on Gaṅgeśopādhyāya's *Tattvacintāmaṇi*, two types of definitions of *vyāpti* are distinguished, one type being called *siddhāntalakṣaṇa* and the other type being called *pūrvapakṣalakṣaṇa* or *pūrvapakṣavyāpti*. The definition explained in the preceding parā represents the former type and is briefly set forth in this Sanskrit formula:—*Hetuivyāpakasādhyasāmānādhikarāṇyam vyāptiḥ*. This definition, when fully amplified, comes to include the *hetutāvacchedakadharmā*, *sādhyatāvacchedakadharmā*, *hetutāvacchedakasambandha* and *sādhyatāvacchedakasambandha*. It is affirmative in its main form, the latter half

being affirmative, though the adjunct *hetuvyāpaka* reduces itself to the negative form *hetusamānādhikaraṇāntyantābhāvāpratiyogin* (which is never the counter-correlative of any negation co-existing with the reason).

The other type of definition of *vyāpti* is known as *pūrvapakṣalakṣaṇa* in the sense that it is provisional and *prima facie* satisfactory. It is generally put in a negative form. A typical instance of *pūrvapakṣavyāpti* is this:—Co-extension (*vyāpti*) consists in non-existence in every place where the *probandum* (*sādhya*) does not exist (*sādhyaḥbhāvavada-vṛt-titvam*). This definition also, when fully amplified, comes to include the *hetutāvacchedakadharmā*, *sādhya-tāvacchedakadharmā*, *hetutāvacchedakasambandha* and *sādhya-tāvacchedakasambandha*. This *prima facie* definition of *vyāpti* is negative in its main part and is a direct amplification of the conception of *avinābhāva*. The contrast between the two phrases *avinābhāva* and *sāhacaryaniyama* should be clearly understood. The former phrase is more commonly used in earlier Nyāya literature and the latter in later literature. *Vinā* means 'without'; *a-bhāva* means non-existence; and *a-vinā-bhāva*



means non-existence (of the probans or *hetu*) without or in the absence of (the *probandum* or *sādhya*). This is the basis of *pūrvapakṣavyāpti* which is generally negative in its form. The other phrase *sāhacaryaniyama* which is used by Annambhaṭṭa is equivalent to *niyatasāhacarya*, which means invariable co-existence. This forms the basis of what is referred to above as *siddhāntavyāpti*. The *prima facie* definition of *vyāpti* set forth above is defective. It does not hold good in cases where the *sādhya* happens to be a thing whose non-existence anywhere is inconceivable (*kevalānwayī*), like *abhidheyatva* (namableness); nor does it apply to the *hetu* in syllogisms like:—"A quality (*guṇa*) has existence (*sattā*), because it has a generic attribute (*jāti*)". It will be seen that non-existence of the *probans* in a place where the *probandum* does not exist can be conceived of only when its existence in such a place through the specific relation in view (*hetutāvacchedakasambandha*) is conceivable and that, in the latter instance referred to, the presence of the *probans*, *jāti*, through the relation of inference, which is the specific relation in view, in a place like *sāmānya* where the *probandum* (*sattā*) is not present, is inconceivable. In order to get over

difficulties of this kind, the *siddhāntalakṣaṇa* or conclusive definition of *vyāpti* is put forward.

The term *vyāpti* literally means pervasion and lays stress on the *universal* character of the relation kept in view. The phrase 'universal connection' brings out exactly the meaning of the term *vyāpti*. In early Nyāya literature, the term *avinābhāva* is frequently used as the equivalent of *vyāpti*. It should be observed that this term, *avinābhāva*, brings into prominence the *invariable* character of the relation kept in view. The two concepts, *universality* and *invariableness*, imply each other; but they are not identical. A careful examination of early Nyāya literature would show that, from Kaṇāda and Gautama downward, all the leading exponents of the Nyāya-Vaiśeṣika system were quite familiar with the ideas of universality and invariableness as forming the essential elements in the conception of *vyāpti*. Vātsyāyana, who preceded Dignāga, definitely makes use of the conception of *avinābhāva* in his Bhāṣya on the sūtras 2-2-1, 2-2-2 and 2-2-61. The very conception of *vyābhicāra* as a fallacy (*hetvābhāsa*) presupposes the invariableness of the relation called *avinābhāva* or *vyāpti*. Patañjali, in his Mahābhāṣya (on 3—2—124), shows a definite knowledge of the



universal character of the relation called *vyāpti*. In the face of these facts, it would be unreasonable to hold, as Professor Keith does, that the doctrine of indissoluble or invariable relation (*avinābhāva*) is Dignāga's special contribution to Indian logic and that Praśastapāda and others borrowed this idea from Dignāga and developed it. In this connection, attention is invited to the article on "The evolution of *vyāpti*" contributed by one of my former pupils—Mr. A. S. Krishna Rao, M.A.—in part I Volume I, (1927) of the Journal of Oriental Research, Madras.

What is the exact nature of the relation of *vyāpti*, or *avinābhāva*? How is it arrived at? Is it arrived at through perceptual experience? Or does it represent itself the result of an inferential process? If *vyāpti* in its universal form is the basis of inferential reasoning, does it not already contain in itself the result of the inferential process and does it not render inference wholly superfluous? Questions like these were raised and answered both by Naiyāyikas and Mīmāṃsakas of the early and later schools. It would be of great value to students of Indian logic to pay some attention to these questions. Vātsyāyana remarks in his Bhāṣya on 1-1-37,

262 A PRIMER OF INDIAN LOGIC [PART III]

that the parallelism between the *probans* as found in the *pakṣa* and the *probans* as found in the example (*udāharaṇa*), on which the probative character of the *probans* rests, is very subtle and difficult to explain and can be well understood only by men of great learning. (*Tadidam hetūdāharaṇa-yoḥ sādharṁyam paramasūkṣmam duḥkhabodhant paṇḍitarūpavedanīyamiti*).—The *Bhāṣyakāra* says this, not because he was quite innocent of the nature of the invariable or universal relation called *avinābhāva* or *vyāpti*, as Professor Keith and some others may fancy, but because, perhaps, he was keenly alive to the difficulty in satisfactorily answering the questions raised at the beginning of this para and to the snares and pitfalls in the way of generalisation.

Uddyotakara, Vācaspatimiśra, Jayanta and some other early writers on Nyāya describe *vyāpti* as an *unconditioned* or *necessary* relation which is not brought about by any adventitious circumstance—*anaupādhikaḥ sambandhaḥ*. For instance, that smoke is pre-*ved*aded by fire, i.e., that *dhūma* is *vahni-vyāpya* is a necessary and unconditioned relation and does not depend upon any adventitious circumstance; whereas, the relation of *vyāpti* embodied in the proposition—‘Wherever there is fire,



there is smoke'—is not a necessary and unconditioned relation and depends upon the association of fire with the adventitious contact of wet fuel with fire (*ārdrendhanasamyoga*). Such adventitious circumstances are called *upādhayah*. An *upādhi* is an adventitious factor which is invariably concomitant with the *probandum* (*sādhyavyāpaka*) and not so with the *probans* (*sāadhanāvyāpaka*). It is called *upādhi* because, as Udayana explains, its invariable concomitance with the *probandum* comes to be erroneously associated with the *probans*, just in the same way as the redness of a *japā* (China rose) is erroneously associated with a crystal (*sphaṭika*) in its vicinity. To define *vyūpti* as *anauṣādhikasambandha* is significant in several ways. In the first place, it shows that the earlier schools of Indian logic, which adopted this definition, do not definitely insist upon any conscious process of generalisation or universalisation preceding inference. Secondly, according to the early schools, it should be made out that the connection between the *probans* (*hetu*) and *probandum* (*sādhya*) is necessary. Thirdly, in order to satisfy oneself that the connection in question involves necessity, one should know that it is not due to association with any adventitious

circumstance, *i.e.*, that it is *svābhāvika* and not *aupādhika*. Further, this definition clearly lays greater stress on the element of necessity in the relation between the *hetu* and *sādhya* than on the element of invariableness. It should, however, be remembered, in this connection, that Gautama, who recognised *vyabhicāra* or absence of invariableness as a fallacy, and Vātsyāyana and Praśastapāda who definitely referred in their works to the concept of *avinābhāva* as an essential element in *anumāna*, were fully alive to the importance of the idea of invariableness in *vyāpti*.

What is the form in which the relation of *vyāpti* comes to be known and leads to inference? How does it come to be known? According to Annambhaṭṭa, who follows Gaṅgeśopādhyāya in this as in several other matters, the cognition of *vyāpti* (*vyāptijñāna*) arises in the form of a universal generalisation which is usually embodied in the proposition—"Wherever there is smoke, there is fire" (*yatra yatra dhūmaḥ tatra vahniḥ*), or in the proposition—"Whatever has smoke, has fire" (*yo yaḥ dhūmavān so' gnimān*); in a statement of *vyāpti*, the *vyāpya* (pervaded) should be first referred to and the *vyāpaka* should be the principal predicate; and the



cognition of *vyāpti* arises usually from the observation of the co-existence of smoke and fire in one or more instances, in the absence of any knowledge of a place where the *hetu* is present and the *sādhya* is not present. Annambhaṭṭa criticises the view that the relation of invariable concomitance is known through *bhūyodarśana* or repeated observation. As Nīlakaṇṭha points out, the Sanskrit phrase *bhūyodarśana* is ambiguous. It may refer to the frequent repetition of the same observation or to observation of several instances of the *sādhya* and *hetu* or to observation of the co-existence of the *sādhya* and *hetu* in several places. In any of these senses, though the observation of the co-existence of *hetu* and *sādhya* may be repeated a thousand times, *vyāpti* cannot be made out, if, even in a single instance, the *hetu* is known to be present in the absence of the *sādhya*. So, following the *Manikāra*, Annambhaṭṭa points out that a knowledge of the co-existence of the *hetu* and *sādhya* in association with the absence of a knowledge of the presence of the *hetu* where the *sādhya* is not present (*vyabhicārajñānavirahasahakṛtaṁ saha-cārajñānam*) causes *vyāptijñāna*. Knowledge of *vyabhicāra* may arise in the form of a doubt or one may be sure of

the presence of this defect. In the latter case, unless it is shown that such knowledge is erroneous, one cannot make out the relation of *vyāpti*. In the former case, any doubt, of *vyabhicāra*, which is otherwise technically known as *aprayojakatvaśaṅkā* and which is usually expressed in the form "Let there be the *hetu*; the *sādhya* need not be present" (*heturastu sādhyam māstu*), is removed by an indirect type of reasoning known as *tarka*. The indirect argument called *tarka* corresponds to *reductio ad absurdum* and consists in showing how the assumption of the opposite leads to an absurd result by coming into conflict with some established truth. In the case of invariable concomitance between smoke and fire, for instance, if one should doubt that smoke may be present somewhere in the absence of fire, the indirect argument of *tarka* may be put forward in this form:—"If smoke were present in the absence of fire, smoke could not be produced by fire. But the causal relation between fire and smoke is a well-recognised fact". Thus according to later Naiyāyikas, *vyāpti* is a universal type of generalisation covering all conceivable cases, both observed and unobserved. The element of invariableness is of greater value than the

element of necessity, in ensuring the safe passage of inferential thought from the known to the unknown, though these two elements—invariableness and necessity—imply each other. The element of necessity looms large only at the stage at which the element of invariableness happens to be challenged and comes to be maintained by a suitable *tarka*.

In several instances the universal relation of *vyāpti* is felt to be arrived at as perceptual experience (*pratyakṣa*) through some sense-organ. Perceptual experience presupposes some *sannikarṣa* (sense-relation) between the sense concerned and the objects coming within the scope of the experience in question. When, for instance, one comes to have visual perception of the relation of invariable concomitance between all smokes and all fires, it is through the super-normal sense-relation (*alaukika-sannikarṣa*) called *sāmānyalakṣaṇapratyāsatti* that all the smokes and fires are brought within the reach of the visual sense. The nature of this super-normal sense-relation is explained in pages 234 to 238 of Chapter I, *supra*. Thus, according to later Naiyāyikas, the knowledge of *vyāpti* arises in several cases as super-normal perception through the super-normal sense-relation of sense-bound generality



(*sāmānyalakṣaṇasannikarṣa*). Jayantabhaṭṭa discusses the nature of *vyāptijñāna* in pages 121 to 123 of his *Nyāyamāñjarī* (Viziaya-S. S.) and arrives at the conclusion that it arises through the inner sense, *manas*, as mental perception (*mānasapratyakṣa*), when co-existence is observed and no hitch in such co-existence is seen. Evidently, Jayantabhaṭṭa is inclined to think that *manas*, though it cannot directly reach external objects (*bahirasvatantram manah*) under ordinary circumstances, is resourceful enough to reach all the smokes and fires, both observed and unobserved, in the absence of definite obstacles in the way. Jayanta, however, does not account for the mind's resourcefulness in this direction and seems to be inclined to attribute it to its nature and not to the aid of any super-normal sense-relation known as *sāmānyalakṣaṇasannikarṣa*. The nature of this *sannikarṣa* has been explained in detail on pages 234 to 238, in Chapter I, *supra*.

Buddhist logicians like Dignāga and Dharmakīrti lay particular stress on the negative phase of *vyāpti*—viz.: non-existence of the *probans* in the absence of the *probandum* (*avinābhāva*). They hold that every case of *avinābhāva* involves a necessary and indissoluble connection between the *hetu* and

INFERENCE

the *sādhya* and that this connection is based upon identity (*tādātmya*) or causality (*tadutpatti*). The Naiyāyikas rightly criticise this view as ignoring such cases of invariable concomitance as do not rest upon identity or causality—cases like a blind man's inference of colour (*rūpa*) from taste (*rasa*).

The Mīmāṃsakas of the Bhāṭṭa school maintain that *vyāpti*, in the form of a universal generalisation, is not a necessary condition of inference. Fire is observed to be co-existent with smoke in two or three places; and smoke is never seen to be present in a place where fire is not present. When one comes to have this experience repeatedly within the sphere of one's observation, one finds oneself in a position to make out invariable connection between smoke and fire in the form in which they happen to be seen in the particular instances which have come within the scope of one's observation. When one later on happens to see smoke in the same form in an unobserved place as in a place already observed, or even when one happens to see smoke again in the same form in an observed place as already observed there, one's mind comes to have a knowledge of the presence of fire in that place where smoke is seen for the moment. The know-



ledge of fire which thus arises cannot be regarded as perceptual experience as fire is not for the moment within the range of any of the senses; nor can it be regarded as reproduction in memory of a past experience, since the knowledge of fire which thus arises is felt to be experience having reference to the existence of fire in the present time. Thus, according to the Bhāṭṭas, the proposition 'Wherever there is smoke, there is fire' represents ordinarily a restricted form of synthesis which has reference only to the observed particulars and is quite adequate as a condition of inference; and anybody who is equipped with the knowledge embodied in this proposition would be able to infer the existence of fire on seeing smoke in any place, provided there is no suspicion of *vyabhicāra* (presence of *hetu* in the absence of *sādhyā*). At the same time it must be remembered that Bhāṭṭas do not deny that, not infrequently, in the course of inferential reasoning, one may arrive at a universal generalisation of the type recognised by the Naiyāyikas, which has reference to the invariable concomitance between all cases of *hetu* and *sādhyā*, including observed and unobserved instances in the present, past and future. The Bhāṭṭas, however, insist that such

universal generalisations themselves are cases of inference. Pārthasārathimīśra, one of the most reliable exponents of Kumārila's views, explains the inferential process through which such universal generalisations are arrived at. In this connection, a reference to Pārthasārathi's *Nyāyaratnamālā* (Chowkhām̐ba edition—pages 69 and 70) would show how unobserved places, which have smoke, may be inferred to have fire, from the fact that smoke is predicated in those places, on the basis of observed cases. In the face of this, it would not be correct to suppose, as Professor Randle does in foot-note (1) to page 282 of his recent work—“Indian Logic in the Early Schools”, that “there is nowhere in Indian Logic the notion that Induction or generalisation is an inferential process”.

The Prābhākaras hold that *vyāpti* is the invariable relation between *hetu* and *sādhya*, which, when it is made out, happens to be free from temporal and spatial limitations and thus comes to assume the form of a universal generalisation. In the hearth, for instance, contact between smoke and fire is made out as the relation connecting the two substances—smoke and fire. In the cognition of such relation,



272 A PRIMER OF INDIAN LOGIC [PART III]

the two relata are the two principal concepts. The relation on the one side and time and space (*kāla* and *deśa*) on the other are presented in that cognition only as adjuncts subsidiary to the two relata. While two subsidiaries agree to subordinate themselves to a common principal, one subsidiary does not ordinarily tolerate its subordination to the other subsidiary. This is as true in the sphere of thought as in the external world. Thus the knowledge of the relation between smoke and fire that arises from the observation of their co-existence in particular instances takes a universal form, unhampered by the temporal and spatial limitations of the particular place and time actually coming within the scope of observation. With the help of such a universal generalisation, when a person infers fire in a mountain on seeing smoke there, he is, in fact, cognising again what has already been cognised and forms part of the content of the generalisation at which he arrived as a result of his observation. Such inference is valid experience (*pramā*), though it cognises something already cognised. According to the Prābhākaras, all cognitions other than recollection are valid (*pramā*) and it is not necessary that a *pramā* should cognise something not already

cognised. Thus, the Prābhākara maintain that inferential experience is *re-experience* and does not involve the passage of the mind from the known to the unknown, as is commonly supposed to be the case; but it involves merely the passage of the mind from a known object to something that is already known to be invariably connected with it. In the Prābhākara scheme of inference, even a single observation (*sakṛddarśana*) is enough for having a knowledge of *vyāpti* and repeated observation (*bhūyodarśana*) is, however, useful in showing that the relation observed between *hetu* and *sādhya* is not brought about by any adventitious circumstance (*upādhi*).

From the foregoing account it will be seen that all the leading schools of Indian philosophy are agreed in a general way that generalisation (*vyāptijñāna*) represents the ground-work of inference. The Naiyāyikas and the Prābhākaras take this generalisation to be of a universal type and to have reference to all the conceivable particulars—unobserved as well as observed. The Bhāṭṭas look upon this generalisation as a synthesis confined to the observed particulars, which is arrived at by sinking all incompatible differences. For instance,

274 A PRIMER OF INDIAN LOGIC [PART III]

according to the former, the generalisation "Wherever there is smoke there is fire" has reference to every conceivable case of smoke and fire; while, according to the latter, this generalisation represents a synthesis of all the observed cases and sinks such incompatible differences as are due merely to spatial and temporal limitations.

At a very early stage in the history of Indian logic, the Cārvāka materialist, who recognises only one *pramāṇa*—viz., *pratyakṣa*, throws out against inference, the challenge that *vyāpti* cannot be relied upon as the basis of *anumāna*. The Cārvāka's contention is that, if *vyāpti* were to be restricted to the known or observed particulars, it would be impossible to have any inference regarding unknown or unobserved particulars for the simple reason that the latter are wholly different from the former; and that, if *vyāpti* were to be looked upon as a universal generalisation having reference to all the conceivable particulars, unobserved as well as observed, all that has to be known is already known and nothing remains to be known through inference. This objection is embodied in an old verse which is quoted by several old philosophical writers like Śālikanātha and Jayanta and which runs thus :—

"*Anumābhāṅgapañke'smin nimagnā vādidantinaḥ; Viśeṣe'nugamābhāvaḥ sāmānye siddhasādhyatā.*" (Vide Prakaraṇapañcikā—Benares edn. page 71). The Cārvākas contend that Indian logicians are hopelessly caught between the two horns of the dilemma indicated—they hopelessly sink down in this slough in which *anumāna* is lost. Students of western philosophical literature are here likely to be reminded of the Empiricist's objection that any inference of a particular fact from a general principle already known and taken to be valid would amount to arguing in a circle. They may think in this connection of objections similar to what is put forward by Mill when he says "that no reasoning from generals to particulars can, as such, prove anything; since from a general principle, we cannot infer any particulars but those which the principle itself assumes as known."

To this kind of objection, the logic of the Bhāṭṭa school, as may be evident from their view set forth above, gives the answer that inference is really from particulars to particulars and that, in cases where it appears to be from a *universal* to particulars, the real cause of such appearance is to be found either in the fact that *vyūpti*, constituting



the basis of inference, assumes a general form, since such differences as are immaterial, or incompatible, are left out for the time being ; or it is to be found in the fact that a universal generalisation interposes itself, though it does so as an *intermediate inference*. In this connection, a reference to Bradley's Principles of Logic (pages 323 to 326) would be of great value. One may easily see that Bradley's criticism of Mill's view holds good as against the Bhāṭṭa view also, in a considerable measure. The Bhāṭṭa logic, where it insists upon a very close similarity between the *probans* in the *pakṣa* and the *vyāpya* in the *sapakṣa* (example), reduces inference to reasoning from resemblance. But where it insists upon differences being left out, the reasoning turns out to be one from identity. Is it not then palpable, one may ask in Bradley's language, that, when the differences are disregarded, the residue is a universal ? The strong point in the Bhāṭṭa view is that it shows how inference may really involve an advance in knowledge in two directions :—where one infers unknown particulars from known and where one inferentially arrives at a universal generalisation from the observation of particular instances.

As already explained, the Prābhākaras get over the difficulty under consideration by saying that every experience (*anubhava*) though it may not involve any new element or any advance in knowledge, is valid (*pramā*). All that is required to show that *anumāna* is a *pramāṇa* is that inferential cognition (*anumiti*) resulting from it is an experience (*anubhava*), and not mere recollection (*smṛti*). The Prābhākaras do not consider it necessary to go beyond maintaining that *anumiti*, though it happens to be a re-experience (*gr̥hītagrāhī anubhavaḥ*), is a valid experience. It should, however, be remembered that, according to them, *vyāpti* assumes the form of a universal generalisation; and this is not because every conceivable particular is brought within the scope of a super-normal observation, as the Naiyāyikas contend, but because the elements of time and space do not enter into the scheme of relation represented by *vyāpti*, for the reason already indicated.

The Naiyāyikas, who are the generally accredited exponents of the doctrines of Indian logic, maintain that inference is not from particulars to particulars but it is from universal to particulars. They hold that *vyāpti* is a universal generalisation



which does not represent a mere summation of the observed instances. It has reference to the invariable concomitance between all conceivable cases of *hetu* and *sādhya*. Such a generalisation, though it involves a big leap from the few observed cases to innumerable unobserved cases, is rendered possible through the super-normal sense-relation called *sāmānyalakṣaṇasannikarṣa*. Leaving out the technical concept of *alaukikasannikarṣa*, one might well say that such a big inductive leap is rendered possible by the immense resourcefulness of a disciplined mind in the direction of synthesis. The Nyāya theory of inference effectively exorcises the ghost of *petitio principii*, by drawing attention to the fact that inference helps one to see and understand more. One may be equipped with the universal generalisation—"Wherever there is smoke there is fire" and yet may be quite unaware of the presence of fire in a particular mountain; and on seeing smoke in that mountain, the presence of fire may be inferred there. In such cases, inference leads to a distinct addition to knowledge and helps one to see more. The Naiyāyikas also point out that, after acquiring definite knowledge of a certain thing in a certain place through observation or by

some other means, the same thing may be inferred in the same place; and in such cases, inference helps one to understand more by enhancing the degree of clarity or certitude in the knowledge already got.

32—T

(a) Inference is of two kinds :—inference for one-self and inference for others.

(b) Inference for one-self causes one's own inferential experience. For instance, a person may make out the relation of invariable concomitance between smoke and fire and arrive at the universal generalisation —“Wherever there is smoke there is fire” from his repeated observation in the hearth and such other places and then approach a mountain. He may have doubt as to the presence of fire in



that mountain. On seeing smoke there, he remembers the generalisation—"Wherever there is smoke, there is fire." Then, he comes to have the cognition—"This mountain has smoke which is pervaded by (or invariably concomitant with) fire." It is this cognition that is called *lingaparāmarśa* (the subsumptive reflection of the *probans*). From this cognition arises the inferential cognition—"The mountain has fire". This is what is called *inference for one-self*.

(c) *Inference for others* is the syllogistic expression which consists of five members and which a person employs after inferring for himself fire from smoke, with a view to

INFERENCE

281

enabling another person to have likewise the same kind of inferential cognition.

E. G.—“The mountain has fire; because it has smoke; whichever has smoke has fire, as a hearth; this mountain is such (has smoke which is invariably concomitant with fire); and therefore, it is such (has fire).” From this five-membered syllogism, the other person to whom it is addressed comes to know the *probans* (smoke) and infers fire from it.

Professor Keith and some others believe that the above distinction of inference into *inference for oneself* (*svārtha*) and *inference for others* (*parārtha*) was first introduced by Dignāga and borrowed from him by Praśastapāda. (*Vide* Professor Keith’s ‘Indian Logic and Atomism’ pages 106 to 108). A careful consideration, however, of what Vātsyāyana says in his Bhāṣya and Gautama in his sūtras



282 A PRIMER OF INDIAN LOGIC [PART III]

would clearly show that the distinction in question should be held to be at least as old as the Sūtrakāra himself. Vātsyāyana, where he speaks of *anumāna* as distinct from *nyāyaprayoga*, presupposes evidently the distinction of *svārtha* and *parārtha*. Gautama's description of the five members of a complete syllogistic expression would be unintelligible, should it be assumed that he was not familiar with the substance of the distinction in question, though the terms *parārtha* and *svārtha* are not found used in his sūtras.

The distinction of *anumāna* into *svārtha* and *parārtha* is not only as old as the Nyāyadarśana itself; but it is also one of the most vital topics in the Nyāya system. It is a natural result of one of the distinctive features of Indian logic and it enables intelligent critics to appreciate duly the pivotal idea on which Indian logic turns both in its scope and its development. It should be remembered here that Indian logic never allowed itself to be restricted in its scope and development to the exclusively formal side of ratiocination, but always kept in view as its constant, knowledge or, more accurately, knowledge of truth (*tattvajñāna*) in relation to what is conceived of as the *summum bonum*. In this



connection, it would be very interesting to consider what Benedetto Croce, one of the greatest contributors to contemporary philosophical thought, has chosen to observe concerning Indian logic, particularly the distinction of *svārthānumāna* and *parārthānumāna* recognised in Indian logic. Attention is invited to the subjoined extract from pages 583 to 585 of Benedetto Croce's 'Logic as the Science of Pure Concept'—rendered into English by Douglas Ainslie.

"This error, which appeared very early in our western world, has spread during the centuries and yet dominates many minds; so true is this that 'logic' is usually understood to mean 'illogic' or 'formalist logic'. We say our western world, because if Greece created and passed on the doctrine of logical forms, which was a mixture of thoughts materialised in words and of words become rigid in thoughts, another logic is known which, as it seems, developed outside the influence of Greek thought and remained immune from the formalist error. This is *Indian logic*, which is notably antiverbalist
. . . Indian logic studies the naturalistic syllogism *in itself*, as internal thought, distinguishing it from the syllogism *for others*, that is to say, from the more or



284 A PRIMER OF INDIAN LOGIC [PART III]

less usual, but always extrinsic and accidental forms of communication and dispute. It has not even a suspicion of the extravagant idea (which still vitiates our treatises) of a truth which is merely syllogistic and formalist and which may be false in fact. It takes no account of the judgment, or rather it considers what is called judgment, and what is really the proposition, as a verbal clothing of knowledge; it does not make the verbal distinction of subject, copula and predicate; it does not admit classes of categorical and hypothetical, of affirmative and negative judgments. All these are extraneous to logic, whose object is the constant, "*knowledge considered in itself.*"

Students of philosophical literature in the west may find it easy to appreciate, in the light of the above extract, the significance of the distinction which Indian logic recognises between 'inference for oneself' (*svārtha*) and 'inference for others' (*parārtha*). This distinction is not merely one of a formal kind. It is rooted firmly on the fundamental doctrine of Indian logic that syllogistic reasoning should be viewed, not apart from the inductive process of thinking, but merely as a continuation and methodical application of it. In Indian logic,

deduction and induction do not represent two mutually exclusive types of inference but they should always be looked upon as inseparably connected parts of a complete process of thinking called inference (*anumāna*); and the chief function of *anumāna*, as a means of valid cognition, is to enable one to realise how certain facts are inseparably and necessarily connected with each other in accordance with a general principle. This view of inference influenced the development of Indian logic for good and saved it from falling into the grip of formalism which, till very recently, dominated logic in the west. One of the chief advantages which have accrued to Indian logic from this view is that it never makes the extravagant claim that *formal validity* may be viewed apart from, and independently of, *material validity*.

A complete syllogistic expression is called *nyāyaprayoga* by Vātsyāyana and all the Naiyāyikas who followed him. It is a synthesis in expression (*mahāvākya*) built up by five parts or members (*avayavāḥ*), each of which embodies a judgment forming a necessary part of a complete ratiocinative process, expressed in words in order to demonstrate a fact by bringing it into an established scheme of



286 A PRIMER OF INDIAN LOGIC [PART III]

universal and invariable relation. The Nyāya doctrine of five-membered syllogism is at least as old as Gautama and accepted by Vātsyāyana and Praśastapāda, and almost all the later Naiyāyikas and Vaiśeṣikas. These five members are described in the following section of the text.

T—33

(a) The five members of a syllogism are :—(1) the thesis set down (*pratijñā*), (2) the reason (*hetu*), (3) the exemplification (*udāharaṇa*) (4) the subsumptive correlation (*ūpanaya*), and (5) conclusion (*nigamana*) e.g.—“The mountain has fire”—this is the *thesis*. “For it has smoke”—this is the *reason*. “Whichever has smoke has fire, as a hearth”—this is the *exemplification*. “And so is this”—this is the subsumptive *correlation*. “Therefore it is

such "—this is the *conclusion*.

(6) In the case of inferential cognition for one-self as well as that for others, it is the subsumptive reflection of the reason (*liṅga-parāmarśa*) that serves as the efficient and special cause (*karana*). So, *liṅga-parāmarśa* in this sense is the instrument of inferential cognition (*anumāna*).

Annambhaṭṭa's illustrative description of the five members of a syllogism set forth above, read together with the remarks in the *dīpikā*, throws adequate light on the function of each of the members. A typical *pratijñā* is in the form of a proposition consisting of a subject (*pakṣa*), which is already known specifically to both the parties in a discussion, and a predicate which, in a specific form, is proposed to be established in the subject; in other words, it is in the form of a definite thesis to be maintained. Its chief purpose is to bring about a definite knowledge of the *pakṣa* as such or what is proposed to

be proved as having the *probandum* (*sādhya*). The person to whom the *pratijñā* is addressed would naturally desire to know first the reason why the *pakṣa* is said to have the *sādhya* ; and to satisfy this desire, the *liṅga* or the reason which serves to establish the *sādhya* in the *pakṣa* is indicated ordinarily by a term in the ablative case in Sanskrit. It would be possible to satisfy oneself that the reason (*liṅga*) adduced is capable of proving the *sādhya*, only after ascertaining that the former is invariably concomitant with the latter ; and the needed knowledge of the invariable connection between the *probans* and the *probandum* (*vyāptijñāna*), on which the probative capacity of the *probans* depends, is derived from the statement of the example, which is usually in a form like this :—"Whoever has smoke has fire, as a hearth." The *probans* which is made out to be invariably concomitant with the *probandum* (*sādhya-vyāpya*) should be specifically known to be present in the *pakṣa* ; without such a knowledge, the *subsumptive process of thought on which the conclusion rests would not be complete* ; and such a knowledge results from the member called subsumptive correlation called (*ūpanaya*). The final statement of the conclusion called *nigamaṇa* is not a

purposeless reiteration of the thesis, as proved. The purpose of the *niḡamana* is to indicate that the *pro-bans* is not vitiated by the presence of a *counter-pro-bans* proving the contrary (*asaṡpratiṡpakṣitatva*), nor stultified by a stronger proof (*abādhitatva*). According to Gautama and his followers, these five members are called *avayavāḥ* in the sense that they form the necessary parts of a complete syllogistic expression. Vātsyāyana, in his Bhāṡya, refers to and rightly discards an earlier view that the total number of *avayavas* is ten—*viz.*, a desire to know the *probandum* (*jijñāṡā*), doubt regarding the *probandum* or its reverse (*saṡṡaya*), belief in the probability of the *probandum* and in the probativeness of the proof (*śakyaprāṡṡtiḥ*), the object of discussion (*prayojana*) and the removal of doubt on proving the *probandum* (*saṡṡayavyudāṡa*), in addition to the five members of the Nyāya syllogism already mentioned. Of these ten, the first five are only psychological conditions which lead to a discussion and they cannot, in any sense, be said to be logical propositions forming the parts which constitute a complete syllogistic expression. It may be noted here that the Vaiṡeṡika tradition, as recorded by Praśastapāda uses the terms *pratiḡñā*, *apadeṡa*, *nidarṡana*, *anu-*

saṁdhāna and *pratyāmnāya* as the respective equivalents of the Nyāya terms *pratijñā*, *hetu*, *udāharṇa*, *uṣanaya* and *nigamana*.

Vātsyāyana, the author of the Nyāyabhāṣya, in his Bhāṣya on the first Sūtra, equates *nyāya* with *anvīkṣā* and explains it as amounting to a critical investigation of facts by means of instruments of valid cognition. (*Pramāṇairarthaparīkṣaṇam nyāyah*). When such investigation is carried on in a methodical way so as to convince another person of a fact, it is expressed in the form of a five-membered syllogistic expression which is described as *nyāya-prayoga* or *pañcāvayavavākya*. Vātsyāyana further explains, in his Bhāṣya on 1-1-1 and 39, how all the four Pramāṇas accepted by the Naiyāyikas meet in the five-membered syllogism and tend to demonstrate a fact in a conclusive manner. The Bhāṣyakāra points out that the statement of the thesis (*pratijñā*) may be taken to stand for valid verbal testimony (*śabda*), the reason (*hetu*) for the instrument of inference (*anumāna*), the example (*udāharṇa*) for the instrument of perception (*pratyakṣa*) and the subsumptive correlation (*uṣanaya*) for analogy (*uṣamāna*). According to him, one should find in the conclusion (*nigamana*) the culminating stage of demonstrative



expression for the reason that it is *nigamana* that shows how all the four *pramāṇas* have collaborated to conclusively maintain the fact in question; and on this ground, *nigamana* is described as the acme of logical demonstration (*paramo nyāyah*). In order to appreciate fully the significance of the Bhāṣya-kāra's account of *nyāyaprayoga* as represented by the five-membered syllogistic expression described above, it should be remembered that the Naiyāyikas, from Gautama downward, look upon logic both as a science and art, that the function of logic, according to them, comprises both discovery and proof, induction and deduction, and lays adequate stress on the material and formal aspects of reasoning; and that logical debate, even in its apparently non-logical forms of *jalpa* (successful advocacy) and *vitandā* (destructive objection), is never allowed to stand completely divorced from the aim of *nyāya*, viz., conclusive determination of truth (*tattvādhyavasāya*). Remembering these facts, one may easily see that the structure of the five-membered syllogism is designed to meet in an adequate manner the requirements of logical demonstration, which seeks to convince another person by drawing his attention specifically to a fact and by enabling his mind to



292 A PRIMER OF INDIAN LOGIC [PART III

pass through successive stages of thought which conclusively establish that fact. Professor Randle is inclined to believe that Vātsyāyana thinks of the five-membered syllogism "as more than inference or the expression in words of inference" and that "the five-membered formula was influenced by its historical origin in a *nyāya* which was methodological rather than logical and its structure must be regarded as in part vestigial, rather than determined by the requirements of logical analysis." (*Vide* pages 165 to 167 of Professor Randle's recent book 'Indian Logic in the Early Schools'). The learned Professor's estimate of the five-membered syllogism of Nyāya and his interpretation of Vātsyāyana's remarks in this connection can hardly be said to have given due weight to the fact that Indian logic, particularly in its early stages as exhibited in the Sūtras of Gautama and the Bhāṣya of Vātsyāyana and in the connected early literature, never allowed valid *anumāna* (inference) to be divorced from other Pramāṇas, at any rate from the more important of them, *viz.*, perceptual instrument (*pratyakṣa*) and credible verbal testimony (*śabda*), and that syllogistic formalism abstracted from induction is an aberration unthinkable to the Naiyāyikas. A careful consideration of these facts

would show that the structure of the five-membered formula need not be regarded as in part vestigial. On the contrary, the considerations indicated above would show that this formula is based on an efficient and self-contained type of verbal apparatus which logical methodology has evolved for the purpose of demonstration. Professor Randle further observes that "either *hetu* or *ūpanaya*, and either *pratijñā* or *nigamāna* are superfluous and this superfluity is inherited from the time when the Nyāya was a method of debate and not yet a syllogism; and in the case of the Nyāya school, the convention of five members may have been fixed by a desire to equate the four 'premises' with the four *Pramāṇas*." If syllogistic expression, like any other expression, directly or indirectly presupposes a hearer to whom it is addressed, if *nyāyaprayoga* or syllogistic expression finds a place only in inference for others (*parārthānumāna*), and if the process of reasoning in inference for oneself (*svārthānumāna*) is not syllogising, a strictly logical debate, as recognised by Gautama and his followers, must involve a self-contained syllogistic expression as its main part. The aim of such a self-contained syllogism is to enable the hearer, *first* to specifically think of what has to be

A PRIMER OF INDIAN LOGIC [PART III]

demonstrated, *secondly* to learn what the reason is, *thirdly* to understand how the universal and invariable relation which forms the basis of inference is arrived at through observation, *fourthly* how the reason actually relied upon is identical with what is known to be invariably concomitant with the *probandum* and *fifthly* to realise that the *probandum* is conclusively proved by a *probans* which is not vitiated by a *counter-probans* or by a stultifying proof. As already indicated, these five requirements can be fully met by the five members of a syllogism, *viz.*, *pratijñā*, *hetu*, *udāharaṇa*, *ūpanaya* and *nigamaṇa*. It will be seen from this that the five-membered syllogism of Gautama, far from comprising any superfluous member, is the only complete form of syllogistic expression which would enable a hearer's mind to pass in a methodical way through each of the five stages of demonstrative reasoning, as indicated above.

The Nyāya theory of five-membered syllogism may here be compared with the theory of *three* members (*avayavāḥ*) put forward by the Mīmāṃsakas and the Buddhist theory of *two* members. The Mīmāṃsakas maintain that either *pratijñā*, *hetu* and *udāharaṇa*, or *udāharaṇa*, *ūpanaya* and *nigamaṇa*

will do; for, the conclusion should be specifically stated and a knowledge of the general relation between the *probans* and the *probandum* and of the presence of the *probans* in the *pakṣa* (*vyāpti* and *pakṣadharmatā*) is necessary, and these requirements are fully met by the three members above mentioned. The Buddhists hold that syllogistic expression is only an aid to reasoning and that it would be unreasonable to assume that any hearer endowed with the minimum capacity for reasoning would require more than the members conveying the needed information about *vyāpti* and *pakṣadharmatā* and that the two members necessary for that purpose, *viz.*, the example and the subsumptive correlation (*udāharāṇa* and *uṣanaya*) would be quite adequate to form a syllogism. It may also be noted here that the three-membered syllogism of the Mīmāṃsakas, represented by the latter alternative, *viz.*, *udāharāṇa*, *uṣanaya* and *nigamana*, may be regarded as a close parallel to the Aristotelian syllogism of the *Barbara* mood. The Naiyāyikas would criticise the three-membered syllogism of the Mīmāṃsakas and the two-membered syllogism of the Bauddhas as incomplete and truncated, for the former, when it consists of *pratijñā*, *hetu* and *udā-*



harāṇa omits to make provision for equating the *probans* in the *pakṣa* with the *vyāp̥ya* and for obviating any possible suspicion of a *counter-probans* or a stultifying proof (*satpratīpakṣatva* or *bādha*); while, in the form which consists of *udāharāṇa*, *uḥpanaya* and *nigamana*, it startles the hearer by a generalisation without adequately preparing him: and the latter adopted by the Bauddhas combines all these defects.

It may be noticed that all the schools of Indian logic—the Nyāya, Mīmāṃsā, Bauddha and the other schools—agree in regard to the importance and value of the example (*udāharāṇa*) as a member of syllogistic expression. Ordinarily, *udāharāṇa* is in a form like this—"Whichever has smoke, has fire, as the hearth." Its aim, according to the Naiyāyikas, is to show how the generalisation on which deduction rests is arrived at. Consistently with this aim, the former part refers to the universal connection between the *probans* and the *probandum* and the latter part refers to a typical instance in which the co-existence between the *hetu* and *sādhyā* may be observed. Nyāya tradition, which must have influenced Gautama's mind when, in his Sūtra 1-1-5, he proceeds to give an account of the different classes

soning has been treated by the Naiyāyikas as an integral part of a complete syllogism, it must be accepted that the *udāharaṇa* as known to Gautama and his followers comprises both the parts, *viz.*, the part representing *vyāpti* and the part referring to a typical instance, and neither the former nor the latter of these two parts can be held to be a later addition. The logic of Nyāya seeks to combine discovery and proof; the Nyāya syllogism is such a harmonious blend of induction and deduction as ensures the safe progress of thinking on right lines; and if, sometimes, the syllogism of Nyāya is abused in Indian philosophical speculation, it is certainly due to the fact that the basis of syllogistic reasoning in such cases turns out to be a superficial or unsound induction, and not to any defect in the scientific method of reasoning formulated by the Naiyāyikas.

Students of western logic, when they compare the Nyāya syllogism with Aristotelian syllogism, are not likely to miss the striking contrast between them. This contrast consists in the Nyāya system not recognising anything really corresponding to the syllogistic figures and moods known to western logic. Ordinarily, the generalisation on which the typical Nyāya syllogism rests is a *universal affirma-*



INFERENCE

tive proposition, the proposition corresponding to the minor premise is usually stated in the form of A and the conclusion is also usually in A. So, it may be said that the typical Nyāya syllogism is of the *Barbara* type. In this connection, a student of Nyāya, familiar with the distinction made in Nyāya literature between *pakṣatāvacchedakasāmānādhikarāṇyenaṇumiti* and *pakṣatāvacchedakāvacchedeṇaṇumiti* may feel that there is some reason to find in the former case a conclusion in I and to connect such conclusions in I with a minor premise in I; thus, in such cases, he may feel inclined to find instances of the mood represented by *Darii*. In the same way, one may be inclined to find an instance of the mood *Camestres* in a syllogism like this—"Whichever has negation of fire has negation of smoke. No tank has fire. No tank, therefore, has smoke". But a careful consideration of the Nyāya theory of syllogism in the light of the Nyāya view regarding the interpretation of propositions would make it clear that, strictly speaking, it would not be correct to find in any Nyāya syllogism, a parallel to any western figure or mood. The Nyāya conception of a typical syllogism is that it depends chiefly upon a

proposition embodying *vyāpti*. *Vyāpti* is an invariable or universal generalisation in the sense that it consists in unfailing connection between a *probans* and *probandum* looked upon as attributes predicated of certain subjects rather than as things having such attributes. The Nyāya view is generally in favour of adopting the *intensive* or *connotational* method of interpreting propositions and mostly avoids the *extensive* or *denotational* method. When a proposition like "All S is P" has to be interpreted by a Naiyāyika, he would first think of the universal and invariable connection between the essential attribute connoted by S and that connoted by P and would not so readily think of all the individuals denoted by S and P. It should also be remembered in this connection that there is no fundamental difference between a *vyāpti* of two positive factors and that of two negative factors. In fact, the proposition "Wherever there is no fire, there is no smoke" is for all practical purposes taken by the Naiyāyikas to be equivalent to "Wherever there is negation of fire, there is negation of smoke". A Naiyāyika would have as little hesitation in saying "Negation of fire is" (*vahnyabhāvō'sti*) as in saying "Fire is" (*vahnirasti*), *abhāva* or non-existence being as much a real cate-

gory as a *bhāva* or positive entity. In these circumstances, one may easily see how Indian Nyāya did not attach much importance in syllogistic reasoning to the artificial distinctions of A, I, E and O propositions, though the Sanskrit language was quite capable of expressing such distinctions, and how the formalistic formulas of different figures and moods came to be almost completely eschewed in Indian logic.

34—T

(a) *Probans* (*liṅga* = literally, mark) is of three kinds—concomitant in affirmation and negation (*anvayavyatireki*), concomitant in affirmation alone (*kevalānvayi*) and concomitant in negation alone (*kevalavyatireki*).

(b) The *anvayavyatireki* type of *probans* is that which has affirmative concomitance (*anvayavyāpti*) and negative concomitance (*vyatirekavyāpti*) with the



CSL

302 A PRIMER OF INDIAN LOGIC [PART III]

probandum; as smoke when fire is the *probandum*. "Where there is smoke, there is fire, as in a hearth"—this is affirmative concomitance. "Where there is no fire, there is no smoke, as in a tank"—this is negative concomitance.

(c) The *kevalānvayi probans* has affirmative concomitance alone; as—"Jar is namable, because it is knowable, like a cloth". In this instance, negative concomitance is impossible between knowability (*prameyatva*) and namability (*abhidheyatva*); for all things are knowable and namable.

(d) The *kevalavyatireki probans* has negative concomitance alone; as in the syllogism—"Earth is different from the rest (*not-earth*),

for it has smell; whichever is not different from the rest (*not-earth*) has no smell, as water; this (earth) is not so—*i.e.*, it does not have absence of smell or *gandhā-bhāva*, with which the absence of difference from *not-earth* (*prthivītarabhedā-bhāva*) is invariably concomitant (*vyāpya*); therefore, it is not so—*i.e.*, it is not devoid of difference from *non-earth*". In cases like this, there is no example in which the affirmative concomitance "Whichever has smell, has difference from non-earth" may be made out; for all varieties of earth come under the *pakṣa* (subject).

35—T

(a) *Pakṣa* (subject) is that in which the presence



of the *probandum* is not known for certain and is yet to be proved; as a mountain, when smoke is relied upon as the *probans*.

(b) *Sapakṣa* is a similar instance, in which the *probandum* is known for certain; as a hearth, in the same case of inference.

(a) *Vipakṣa* is a counter-example in which the non-existence of the *probandum* is known for certain; as a tank, in the same case of inference.

In section 34 of the text given above, Annambhaṭṭa explains the three types of *probans* recognised by the Naiyāyikas—viz., the affirmative-negative *probans* (*anvayavyatireki*), the exclusively affirmative (*kevalānvayi*) and the exclusively negative (*kevalavyatireki*). The Advaita-vedāntins insist that there is only one type of *probans*, viz., *anvayi* (affirmative) and that inference arises always through subsumption to an affir-

mative generalisation. The Bhāṭṭas, though they are inclined to recognise the *anvayavyatireki* and *kevalānvayi* types of *probans*, are generally in favour of bringing the *kevalavyatireki* type under a distinct *pramāṇa* called *arthāpatti*. The Mīmāṃsakas maintain that a negative generalisation (*vyatirekavyāpti*) is fit to be treated as the basis of a presumptive conclusion (*arthāpatti*) and only an affirmative generalisation admits of being treated as the basis of a subsumptive conclusion (*anumiti*). In this connection, it would be desirable to peruse again pages 182 to 189 (part III *supra*), which contain a full discussion of all the important questions relating to *arthāpatti* as a distinct *pramāṇa* and an explanation of the chief reasons why Naiyāyikas would bring cases of *arthāpatti* under the *kevalavyatireki* type of reasoning.

36—T

(a) Fallacious reasons (*hetvābhāsāḥ* = literally, semblances of reason) are of five kinds:—*viz.*, the reason that strays away (*savyabhicāra*) the adverse reason (*viruddha*), the opposable reason



(*satpratipakṣa*), the unestablished reason (*asiddha*), and the stultified reason (*bādhita*).

(b) The straying reason (*savyabhicāra*) is otherwise known as *anaikāntika* (literally, not unfailing in its association with the *probandum*). It is of three kinds;—viz., common (*sādhāraṇa*), uncommon (*asādhāraṇa*) and non-conclusive (*anupasañhārīn*).

The common strayer (*sādhāraṇa*) is that variety of *straying reason* which is present in a place where the *probandum* (*sādhya*) is not present; as, in the argument—"The mountain has fire, because it is knowable". In this argument *knowability* is found in a tank where fire is not present. The *uncom-*

mon strayer (*asādhāraṇa*) is that reason which is present only in the subject (*pakṣa*) and not present in any similar example (*sapakṣa*) or counter-example (*vipakṣa*); as *sound-ness* (*śabdatva*), in the argument—"Sound is eternal, because it is sound", *śabdatva* (*sound-ness*) being present only in sound, and nowhere else, eternal or non-eternal.

The *non-conclusive strayer* (*anupasaṁhārin*) is that reason which has no affirmative or negative example (*anvayadr̥ṣṭānta* or *vyatirekadr̥ṣṭānta*); as *knowableness* (*prameyatva*) in the argument—"All things are non-eternal, because they are knowable". Here, no example is available since all things are treated as *pakṣa*.



(c) The *adverse reason* (*viruddha*) is one which is invariably concomitant with the non-existence of the *probandum*; as producibility (*kṛtakatva*), in the argument —“Sound is eternal, because it is produced”. Here producibility is invariably concomitant with non-eternality, which amounts to the non-existence of eternality.

(d) The *opposable reason* (*satpratipakṣa*) is one which admits of being counter-balanced by another reason that proves the non-existence of the *probandum*; as audibility in the argument —“Sound is eternal, because it is audible, like soundness (*śabdatva*)”. The counter reason in this case is producibility (*kāryatva*) in the counter-argument—“Sound



is non-eternal, because it is producible''.

(e) The *unestablished reason (asiddha)* is of three kinds:—*viz., unestablished in respect of abode (āśrayāsiddha), unestablished in respect of itself (svarūpāsiddha) and unestablished in respect of its concomitance (vyāpyatvāsiddha).*

The reason is *āśrayāsiddha* in the argument—*"Sky-lotus is fragrant, because it is a lotus, like the lotus of a pond"*. Here, *sky-lotus* is the abode or subject and it never exists.

The reason is *svarūpāsiddha* in the argument—*"Sound is a quality, because it is visible, like colour"*. Here, *visibility* cannot be predicated of sound, which is only audible.



The reason is said to be *vyāpyatvāsiddha* when it is associated with an adventitious condition (*upādhi*). That is said to be an adventitious condition (*upādhi*), which is pervasive of the *probandum* but not pervasive of the *probans*. 'To be pervasive of the *probandum*' means 'never to be the counter-correlative (*pratiyogin*) of non-existence (*abhāva*) which co-exists with the *probandum*'. 'Not to be pervasive of the *probans*' means 'being the counter-correlative of non-existence which co-exists with the *probans*'. In the argument—"The mountain has smoke, because it has fire", *contact with wet fuel* is the adventitious condition (*upādhi*). "Where there is

INFERENCE

311

smoke, there is contact with wet fuel"—thus it is pervasive of the *probandum*. There is no contact with wet fuel in every place where there is fire; for instance, a red-hot iron ball has no contact with wet fuel; thus the *upādhi* is non-pervasive of the *probans*. In this manner, contact with wet fuel is the *upādhi* in the present instance, because it is pervasive of the *probandum* but not pervasive of the *probans*. And fire, in the argument under reference, is *vyāpya-tvāsiddha*, since it is associated with an adventitious condition (*upādhi*).

(f) The *stultified reason* (*bādhita*) is one which is put forward to prove a *probandum* whose non-existence is established by



another proof. "Fire is not hot, because it is a substance", the *probandum* is 'not being hot'; its reverse—'being hot'—is perceived through tactile perception; so, the *probans* is *stultified* (*bādhita*).

Thus ends the chapter on inference.

A *hetvābhāsa* is a semblance of reason. It is a fallacious reason or defective reason. It would not be quite correct to use the term *fallacy* as an equivalent of *hetvābhāsa*. In western logic, the term *fallacy* is generally understood in the sense of 'a defective conclusion or interpretation,' resulting from a defective process of thinking. The classification and elucidation of fallacies in western logic are generally influenced in a direct or indirect way by Aristotle's division of fallacies into those which are related to expression and those which are not. Students of western logic are aware that the basis of the Aristotelian classification of fallacies can hardly be considered satisfactory either from the logical or from the rhetorical point of view. As early as in



the age of Gautama, the Nyāya system of Indian thought equipped itself with a fairly satisfactory and well-defined scheme of *hetvābhāsa* or *defective probans*. Gautama definitely classifies defective reasons under five heads and uses the significant expression *hetvābhāsa*, which suggests the *fundamentum divisionis* of his classification. The expression *hetvābhāsa* literally means 'a semblance of reason' or 'what appears to be a reason while it is really not such'. The true function of a *hetu* or *probans* is to *prove*. The defects which vitiate a *probans* are called *hetudoṣāḥ*. The common feature of such defects is that they vitiate the probative value of a *probans*. That this common feature—viz., *vitiating the probative value of a probans*—is the fundamental basis of Gautama's classification of defective reasons is implicitly conveyed by the significant name *hetvābhāsa* used by Gautama. It may be noted here that the same philosophic instinct, that helped the Nyāya theories of inference and syllogism over the formalistic barriers which western logic still finds it difficult to surmount, has also made it possible for the Nyāya system to equip itself with a really helpful scheme of defective *probans*, hinging on the concept of *hetu*.

314 A PRIMER OF INDIAN LOGIC [PART III

which forms the main ground of syllogistic reasoning. The Naiyāyikas who came after Gautama, more especially later Naiyāyikas like Gaṅgeśa, effectively used the hint afforded by Gautama's classification and clearly and definitely elucidated the principle underlying the Nyāya classification of *hetvābhāsas*. This principle is taken for granted by writers like Annambhaṭṭa and is embodied in the definition of *hetvābhāsa* in general. This definition may be set forth thus:—A defective *probans* (*hetvābhāsa* or *duṣṭahetu*) is a reason whose probative value is vitiated by a circumstance, a valid knowledge of which would prevent the inferential cognition (*anumiti*) kept in view or the efficient cause of such cognition (*anumitikaṛṇa*). For instance, a *vya-bhicārihetu*, which is of the *sādhāraṇa* type (common strayer), such as 'a jar' in the argument—"The mountain has fire, because it has a jar", is a defective *probans* (*duṣṭahetu* or *hetvābhāsa*); because its probative value is vitiated by the fact that it happens to be present in a place where fire is not present and a valid knowledge of this fact would prevent the generalisation (*vyāptijñāna*)—"Wherever there is jar, there is fire". This is a typical case where the efficient cause of inference (*anumitikaṛṇa*) is

prevented. In an argument like this—"Fire is not hot, because it is a substance", the *hetu* is of the *bādhita* type (*stultified probans*); in this case, the probative value of the *probans* is vitiated by the fact that it happens to be put forward to prove a thing which is already disproved by perceptual experience; that fire is not cold is a fact established by *pratyakṣa*; and a valid knowledge of the fact that fire is never cold would directly prevent the inference that fire is cold. Thus, it will be seen that a valid knowledge of some vitiating elements (*hetudoṣa*), would directly prevent inferential cognition (*anumiti*) and a valid knowledge of some others like *vyabhicāra* would prevent only the efficient cause of inference (*anumitīkarana*), such as generalisation, in the form of knowledge of the invariable relation between the *probans* and *probandum*. The Naiyāyikas would insist that it is only a real defect, and not a fancied one, that should be taken to vitiate the probative value of a *probans*. Any erroneous notion that the connection between a valid *probans*, like smoke, and a *probandum*, like fire, is not invariable, should not be held to vitiate the probative value of the *probans*.

Of the three varieties of the vitiating circumstance called *vyabhicāra* (literally, straying away or inconstancy), the first, known as *sādhāraṇa*, is the most important. It generally proceeds from a careless or hasty generalisation and when detected, it prevents a valid knowledge of invariable connection (*vyāptijñāna*). The *uncommon strayer* (*asādhāraṇa*) is conceived of by the earlier Naiyāyikas as a reason which is known not to co-exist with the *probandum* in any *sapakṣa*, where the *probandum* is recognised to be present. In the illustration of *asādhāraṇa* given in the text, *śabdatva* (sound-ness) is present only in the *pakṣa* and nowhere else. According to the earlier Naiyāyikas, *asādhāraṇatva* is *anityadoṣa* or operates as a defect only under certain circumstances. They draw a distinction between *nityadoṣa* (permanent defect)—a defect, which, when rightly detected, always vitiates the *probans*, and *anityadoṣa* (occasional defect)—a defect which, when rightly detected, vitiates the *probans* only under certain circumstances. They also hold that *asādhāraṇatva* is an occasional defect (*anityadoṣa*) in the sense that a valid knowledge of its presence vitiates the reason only so long as there is a doubt regarding the presence of the *probandum* in the *pakṣa*. For

instance, in the example given in the text, *śabdatva* (sound-ness) may be said to be not present in a *sapakṣa*, only so long as there is some doubt regarding the presence of the *probandum* in the *pakṣa*; and if one should be sure of the presence of the *probandum* in the *pakṣa* and still desire to confirm one's knowledge by means of inference, the *probans*—*śabdatva*—cannot be said to be not present in any place where the *probandum* is known for certain to be present, for the obvious reason that the *probans* is present in the *pakṣa*, where the *probandum* is already known for certain to be present. Annambhaṭṭa adopts the view of the earlier Naiyāyikas in this matter. The later Naiyāyikas define *asādhāraṇa* to be a *probans* which is not co-existent with its *probandum* (*sādhyaśamānādhikaraṇaḥ*); and a knowledge of the non-existence of the *probans* and the *probandum* would prevent a knowledge of their invariable co-existence. The non-conclusive strayer (*anupasaṃhārin*) is a defective reason which has neither an affirmative example (*anvayadr̥ṣṭānta*) nor a negative example (*vyatirekadr̥ṣṭānta*). This is the view of the earlier Naiyāyikas and the illustration given by Annambhaṭṭa in his text is based on this view. In this illustration, all things come under



pakṣa; when there is doubt regarding the *probandum* everywhere, there can be no certainty concerning the co-existence of the *probans* and the *probandum*, anywhere; thus one cannot have a conclusive knowledge of *vyāpti* in such cases; and this is how, in such cases, the probative value of the *probans* comes to be vitiated. The later Naiyāyikas do not accept this view. They contend that, even when 'all' are *pakṣas*, those particular cases in which one may be sure of the co-existence of the *probans* and the *probandum*, may well be treated as *dṛṣṭānta*; and so, a *non-conclusive strayer* (*anupāsāmhārin*) should be defined to be a defective *probans*, whose *probandum* happens to be omni-present (*kevalānvayin*). The vitiating circumstance in this case is, according to the later Naiyāyikas, that a knowledge of the negative concomitance (*vyativekavyāpti*) is prevented; and, in spite of this defect, inferential cognition (*anumiti*) may arise from a knowledge of positive concomitance alone (*anvaya-vyāpti*).

The adverse *probans* (*viruddha*) and the opposable *probans* (*satpratīpakṣa*) should be carefully distinguished. In the case of *viruddha*, the same *probans* proves the contrary, the *probandum* being

known to be invariably concomitant with the absence of the *probans*. In the case of *satpratīpakṣa*, the *probans* admits of being counter-balanced by an opposite *probans*, which may be put forward to prove the contrary. The vitiating circumstance in a *viruddha* is that it prevents inference (*anumiti*). In the case of a *satpratīpakṣa*, the two counter-balancing reasons prevent each other from producing the inference connected with it. Some Naiyāyikas hold that, in cases of *satpratīpakṣa*, a dubitative type of inferential cognition (*saṁśayarūpānumiti*) arises. It will be seen that *viruddhatva* is a more serious defect than *satpratīpakṣatva*, for the obvious reason that the former involves a greater degree of carelessness in reasoning.

The unestablished reason (*asiddha*) is defective in that a knowledge of the fact that the *probans* is unestablished prevents a knowledge of the presence of the invariably concomitant *probans* in the *pakṣa* (i.e., prevents *parāmarśa*) in the first two varieties—viz., *āśrayāsiddha* and *svarūpāsiddha*; while, in the third variety—viz., *vyāpyatvasiddha*, it is defective in that a knowledge of the relation of invariable concomitance (*vyāptijñāna*) is prevented. In connection with the elucidation of the nature of *upādhi*,

which is associated with the third kind of *asiddha*, Annambhaṭṭa speaks of four kinds of adventitious circumstance (*upādhi*) in his *Dīpikā*. These four varieties are :—(1) an adventitious circumstance with which, the *probandum*, taken by itself, is concomitant (*kevalasādhyavyāpakāḥ*); (2) one with which, the *probandum*, as determined by an attribute of *pakṣa*, is concomitant (*pakṣadharmāvacchinna-sādhyavyāpakāḥ*); (3) one with which, the *probandum*, as determined by the *probans*, is concomitant (*sādhana-vacchinna-sādhyavyāpakāḥ*); and (4) one with which, the *probandum* is concomitant, as determined by an attribute not belonging to the *pakṣa*, nor being the *probans* (*udāsīnadharmāvacchinna-sādhyavyāpakāḥ*). The instance cited in the text, *viz.*, contact with wet fuel (*ārdrendhanasamyoga*) is typical of the first variety of *upādhi*. In the argument—“Air is perceptible; because it has touch which is perceptible”—‘perceptible colour’ (*udbhūtarūpa*) is *upādhi* of the second variety; for, with this *upādhi*, the *probandum*—perceptibility—is invariably concomitant, as determined by the attribute—being an external substance (*bahirdravayatva*)—which belongs to the *pakṣa*. In the argument—“Antecedent negation is destructible; because it is

‘producible’, *bhāvatva* (ens-ness) is *upādhi* of the third variety; for, with this *upādhi*, the *probandum*—destructibility—is concomitant, as determined by the *probans*—producibility. In the argument—“Antecedent negation is destructible; because it is knowable”, *bhāvatva* is *upādhi* of the fourth variety; for, with this *upādhi*, the *probandum* is concomitant as determined by producibility, which is neither the *probans* nor any other attribute of the *pakṣa*. In all these four varieties, it will be seen that the *probans* may be present in a place where the *upādhi* may not be present (*i.e.*, *upādhivyabhicārin*); that the *sādhya* (*probandum*), in one of its four forms described above, is invariably associated with the *upādhi*, which is thus *sādhavyāpaka*; and that the *probans*, which strays away from the sphere of *sādhavyāpaka*, must necessarily stray away from the sphere of *sādhya* itself. A thing, whose extent is represented by a circle, which has a portion falling outside the sphere of a second thing represented by a second circle, must necessarily have a portion falling outside the sphere of a third thing represented by a third circle contained within the second circle representing the sphere of the second thing. This relation is embodied in the generalisation

“Whichever strays away from the *pervader*, must stray away from the *pervaded*” (*yo yadvyāpaka-vyabhicārī sa tadvyabhicārī*). On the basis of this generalisation, every case of *upādhi* leads to the inference of *vyabhicāra* and through such inference, prevents a knowledge of *vyūpti*. Some Naiyāyikas hold that the vitiating circumstance in *upādhi* is that the negation of the particular *upādhi* admits of being put forward as a counter-balancing *probans* to prove the contrary and that it leads thus to the inference of *satpratipakṣatva*. These two views are usually expressed thus in Sanskrit:—“*Upādhiḥ vyabhicāronnāyakah*”; “*Upādhiḥ satpratipakṣonnāyakah*”.

The defect called *bādha* consists in the negation of the *probandum* being already established by a stronger proof. This defect directly prevents inference (*anumiti*). It is sometimes suggested that it is unnecessary to recognise *bādha* as a distinct defect of the *probans*; for, it may be merged in *vyabhicāra* in cases where the *probans* is known to be present in *pakṣa* which is known to be devoid of the *probandum*; and it may be merged in *asiddhi* in cases where the *pakṣa* is known to be devoid of the *probans*. It should, however, be remembered

that the suggested merger is not possible in certain arguments like this.—“A jar at the first moment of its creation has smell; because it is earth” (*utpatti-kṣaṇe ghaṭaḥ gandhavān, pṛthivītvāt*); and that, in such cases, the only defect that may be pointed out is *bādha*.

The Vaiśeṣikas recognise only three *hetvābhāsās*—viz., *viruddha* (the *adverse probans*), *asiddha* (the *unestablished probans*) and *saṁdigdha* (the *doubtful probans*). The last corresponds to what the Naiyāyikas call *vyabhicāra*. The *saṁpratipakṣatva* of the Nyāya system may be brought under *viruddha*, according to the Vaiśeṣikas, and the *bādha*, partly under *saṁdigdha* and partly under *asiddha*.

It is necessary to differentiate the *defective varieties of the probans* (*hetvābhāsāḥ*) described above, from what are known in Gautama's Nyāya as *chala*, *jāti* and *nigrahasthāna*. *Chala* is dialectic quibbling mainly through equivocation. *Jāti* is a futile respondence through parity or disparity. Gautama shows at the end of the first *āhnikā* of the fifth chapter of the *Nyāya-sūtras*, how a debate, carried on exclusively through *jāti*, is bound to become a barren type of dialectic *tu quoque*, leading to nothing. *Nigrahasthāna* is a vulnerable point

which makes for defeat in a debate and need not necessarily invalidate an argument. When a person is described as *navakambala* in the sense that he has a new blanket, it would be *chala* to object to the statement by perversely misinterpreting it to mean 'having nine blankets'. It should be noted here that the expression *navakambala* is ambiguous and may mean having a new blanket' or 'having nine blankets.' To the argument "Sound is non-eternal, because it is produced, like a jar", it would be a futile response (*jātyuttara*) to say "Sound may well be said to be eternal, because it has no activity (*niṣkriya*), like ether". To shift one's ground without adequate reason and give up the thesis proposed to be maintained (*pratijñāhāni* and *pratijñāsamnyāsa*), to be unable to give a suitable reply when a reply is called for (*apratibhā*)—weak points like these are vulnerable points (*nigrahassthāna*) which make for defeat in a debate. All the defective varieties of *probans* (*hetvābhāsāḥ*) may also be treated as vulnerable points, while the latter, other than defective reasons, do not invalidate an argument.



CHAPTER III. ASSIMILATION OR ANALOGY (*uṣamāna*).

37—T

Assimilation (*uṣamāna*) is the instrument of assimilative cognition. Assimilative cognition (*uṣamiti*) consists in the knowledge of the relation between a name and the object denoted by it. Knowledge of similarity is the efficient instrument (*karana*) of such cognition. This may be illustrated thus:—A person happens to be ignorant of the exact meaning of the word *gavaya* (a particular animal of the bovine species). From a forester, he learns that a *gavaya* is similar to a cow; he goes to a forest, sees the animal called *gavaya*, which



CSL

326 A PRIMER OF INDIAN LOGIC [PART III]

is similar to a cow and recollects the information conveyed by the assimilative proposition (*atideśavākya*). Then the assimilative cognition "This is the animal (of the bovine species) denoted by the word *gavaya*" arises.

Thus ends the chapter on upamāna.

The Nyāya conception of *upamāna* as a distinct instrument of valid cognition restricts its scope to ascertainment of the primary denotative or significative power of a word (*śaktigraha*). The chief object of the Naiyāyikas in so restricting its scope is to save it from being swallowed up in inference (*anumāna*). It should be carefully noted here that, according to the Mīmāṃsakas, the cognition embodied in the proposition "The animal called *gavaya* is similar to a cow" is the efficient instrument (*karana*) and the cognition "My cow is similar to this animal called *gavaya*" is the resultant *upamiti* (assimilative cognition); whereas, according to the Naiyāyikas the resultant *upamiti* is in the

form of the knowledge of the primary significative power of the word *gavaya* (*gavayapadaśaktigraha*). It could be easily seen that the relation between the *karana* (efficient instrument) and the *phala* (result), according to the Mīmāṃsakas, is exactly similar to the relation between the two propositions "A is similar to B" and "B is similar to A". The Vaiśeṣikas and Bauddhas could easily show how the latter *viz.*, "B is similar to A" may be taken to be inferred from the former *viz.*, "A is similar to B". The Naiyāyikas cleverly escape from this danger by narrowing the scope of *upamāna* as indicated above. One might, however, remark that the Nyāya conception of *upamāna* is singularly unpractical and unfruitful. *Vātsyāyana's* remarks on *upamāna*, under I i-6 and II i-44 to 48, throw some light on the practical value of this *pramāṇa*. The *Bhāṣya-kāra* points out how it would be of great practical value to know exactly what is denoted by certain technical names of medicinal herbs, as used in the Āyurveda literature. It should be remembered here that the Indian view of a *pramāṇa* is that it is an efficient instrument of valid knowledge, which possesses such unchallenged certitude as is usually associated with validity or as is not nullified by



CSL

328 A PRIMER OF INDIAN LOGIC [PART IIF

subsequent experience; or according to some Indian thinkers, it is an efficient instrument of valid knowledge, which possesses such practical utility and effectiveness as is usually associated with validity. In this way, it would not be difficult to appreciate the reasons why the Naiyāyikas regard *upamāna* as a distinct *pramāṇa*.



CHAPTER IV.

VALID VERBAL TESTIMONY. Sentence or proposition (*śabda*).

38—T

(a) Valid verbal testimony is a proposition set forth by a trustworthy person (*āpta*). One who habitually speaks only truth is a trustworthy person (*āpta*). A sentence or proposition is a group of words like "Bring a cow" (*gāmānaya*).

(b) A word is that which has significative potency (*śakti*). "From this word, this concept should be known"—God's will to this effect (*Īśvarasaṃketah*) is called *śakti* (significative (potency)).

The Vaiśeṣikas would bring valid verbal testimony also under inference. The Naiyāyikas how-



ever, contend that, in cases where valid knowledge is derived from valid verbal testimony (*pramāṇa-śabda*), one is not conscious of any conclusion through subsumption to a generalisation; but one is, on the contrary, conscious of a valid verbal cognition or judgment (*śābdabodha*) resulting from a knowledge of words, without the mediacy of any such subsumptive process of thought. For this reason, the Nyāya system holds that *śabda* deserves the rank of a distinct *pramāṇa*.

The recognition of *śabda* as a distinct *pramāṇa* has laid most of the Indian systems of philosophy open to the charge of dogmatism. Careful students of Indian philosophy know well that this charge, when put forward in a sweeping form, can easily be exposed as based on certain misapprehensions. Certain objections may be raised by advocates of independent thinking against the view of the Mīmāṃsakas that the relation between a word and its meaning is eternal and that the statements constituting the Vedas should be held to be eternal and eternally valid and to possess self-evident validity. But these objections cannot be raised against the Nyāya view of *śabdapramāṇa*. This view seeks to reconcile the Nyāya stand-point of

rationalism with the conception of *śabda* as a distinct source of valid knowledge, through the Nyāya theory of extrinsic validity (*parataḥprāmānya*). According to the Naiyāyikas, it should be remembered that a *śabda* is a source of valid knowledge only in so far as the source of *śabda* is a perfectly trustworthy person and that the validity (*pramāṭva*) of the knowledge derived from a *śabda* is extrinsically caused (*parataḥ utpadyate*) through the reliability of the speaker and is also extrinsically made out (*parataḥ jñāyate*) through verification in direct experience. The Naiyāyikas seek to gain a twofold advantage by this view of *śabda*. One advantage consists in the fact that they have succeeded in freeing their rationalistic system of thought from the reproach of dogmatism; and the other advantage consists in the fact that they are able to base a theistic argument on this view by pointing out that belief in the infallibility of the *Veda* would necessarily imply a belief in the *Veda* having been produced by an infallible author—such an infallible author in the case of *Veda* being none other than the *Omnipotent and Omniscient God*.

The primary significative potency of a word, called *padaśakti*, is the eternal significative relation



between a word and its sense, according to the Mīmāṃsakas; and it should be brought under *śakti*, which is a distinct category or quality according to them. The Naiyāyikas refuse to accept this view and hold that the utmost that could be said about *padaśakti* is that it is the *will* of God to the effect that a particular word should convey a particular sense. This is on the assumption that speech is not a human product but made by God for the benefit of humanity.

39—T

(a) Verbal expectancy, congruity and proximity—these are the causes which bring about verbal cognition or judgment from a proposition.

(b) Verbal expectancy (*ākāṅkṣā*) consists in a word not being capable of conveying a complete judgment in the absence of another word.

(c) Congruity (*yogyatā*) consists in the sense being

not stultifiable.

(d) Proximity (*sañnidhi*) consists in the articulation of words without undue delay.

(e) A sentence which is devoid of expectancy and the other two requirements (congruity and proximity) does not bring about a valid cognition. For instance, a string of words like "Cow, horse, man, elephant" does not produce any judgment; for there is no verbal expectancy (*ākāṅkṣā*) here. The sentence "One should sprinkle with fire" does not produce a valid judgment, as there is no congruity here. Words like "Bring a cow", uttered at long intervals, cannot produce a valid judgment, owing to want of proximity.

334 A PRIMER OF INDIAN LOGIC [PART III

In section 39, Annambhaṭṭa briefly states the Nyāya view regarding the accessories necessary for arriving at a valid judgment from a proposition. In every language, certain words necessarily require certain other words to complete the sense. For instance, a verb denoting an action necessarily requires a *kāraka* such as a word denoting the agent or instrument or object of the action; and in the absence of such a word, it cannot convey a complete sense. This kind of syntactic need is what is called verbal expectancy or *ākāṅkṣā*. Words which are not required for syntactic completeness or which have no kind of syntactic relation whatever cannot form a proposition. *Yogyatā* or congruity of the sense is stated to be another requirement. One can easily see that, in the example given in the text, the concept of *fire* is incongruous as a means of sprinkling; because sprinkling is done with *water*, and not with fire. When the words constituting a sentence are uttered at long intervals, one cannot have any connected thought and complete judgment in the form of verbal cognition does not arise. With regard to the causal connection between *yogyatā* and *śābdabodha*, there is difference of opinion among the Naiyāyikas. Many Naiyāyikas hold that

a decisive knowledge of congruity (*yogyatūniścaya*) is a pre-requisite of verbal cognition. Some of them maintain that a decisive knowledge of incongruity (*ayogyatūniścaya*) prevents verbal cognition (*śābdabodhapratibandhaka*) and the absence of such a counteracting agent is necessary for having the effect.

In this connection, attention may be drawn to the relation between a decisive knowledge of the speaker's intention (*tātparyāniścaya*) and the verbal cognition (*śābdabodha*) arising from a sentence. Some hold that *tātparyāniścaya* is an accessory cause of *śābdabodha*; others hold that it is required only in cases where ambiguous words or expressions are used; and yet others maintain that, though it is required, it need not be referred to separately as a cause of *śābdabodha*, for the reason that *ākāṅkṣā* (syntactic expectancy) consists in the need which one word has for another word in order to convey the complete sense intended to be conveyed and that, in this form, *ākāṅkṣā* includes *tātparyā*.

Students of Nyāya will do well to note the essential features of the Nyāya theory of *śābdabodha*. This theory is, for all practical purposes, the Nyāya theory of the import of propositions.



336 A PRIMER OF INDIAN LOGIC [PART III]

The Nyāya view is that only a determinate judgment (*savikalpakajñāna*) is embodied in, and conveyed by, a proposition; every proposition comprises at least a subject (*uddeśya*) and predicate (*vidheya*); in a verbal judgment (*śābdabodha*) arising in the hearer's mind from a proposition, the meaning of the chief substantive in the nominative case (*prathamāntārtha*) plays the role of the leading concept (*mukhyaviśeṣya*) and all the other concepts are directly or indirectly subordinated to it; the cognition arising from a proposition is always non-perceptual (*parokṣa*); and the additional element conveyed by a sentence, over and above the separate concepts conveyed by separate words, is the intended relation of the concepts (*padārthasaṃsarga*) and this additional element, which is the distinctive feature of a verbal judgment (*vākyārtha*), is conveyed through the particular juxtaposition of words (*saṃsargamaryādā*), and not through a primary or secondary significative power of words (*abhidhā* or *lakṣaṇā*). It may be observed here that the juxtaposition (*saṃsargamaryādā*), referred to here, turns out to be identical with co-utterance (*samabhivyāhāra*), which is reducible to the form of what is technically known as syntactic expectancy (*ākāṅkṣā*).



It may be useful here to contrast the Nyāya theory of *śābdabodha* with the *śābdabodha* theories of certain other Indian schools. According to the *Vaiyākaraṇas*, the activity denoted by the root of the finite verb (*dhātvartha*) is the leading concept in a verbal cognition arising from a sentence; and according to the *Bhāṭṭas*, the 'will to do' (*kṛti*) denoted by the ending of the finite verb is the leading concept there. If, from the stand-point of logical analysis, the *subject* is the central concept of a judgment, the meaning of the root of the finite verb may be regarded as its central concept from the stand-point of linguistic analysis; or the 'will to do', denoted by the ending of the finite verb, may be viewed as its central concept from the stand-point of Mīmāṃsā legalism.

The Nyāya system recognises only two main types of significative force (*śabdavṛtti*)—viz., *abhidhā* (the primary significative force) and *lakṣaṇā* (the secondary significative force). It refuses to accept the third type of significative force called *vyañjanā* or suggestion, which is recognised by the *Ālankārikas* as a distinct type of *śabdavṛtti*, and brings it under inference. According to the Nyāya system, the primary significative force



(*abhidhā*) includes two phases, which correspond to *connotation* and *denotation*, and relate to *jāti* (generality) as the connoted attribute, and to *vyakti* (the individual thing) as the denoted object qualified by such attribute. In other words, the Naiyāyikas generally maintain that the primary sense of a word is ordinarily an individual qualified by a generic attribute (*jātiviśiṣṭavyakti*). Students of modern philosophy will find it easy to see that, according to the Nyāya system, the *concepts* conveyed by separate words are *apparent simples*, but really *petrified judgments*. All the names, including proper names, are connotative, according to Nyāya.

40—T

(a) There are two classes of sentences: those that belong to the *Veda* and those that belong to secular speech. Those that belong to the *Veda* are all statements of God and therefore authoritative. Of those that belong to secular speech, such as are produced by trustworthy persons are



authoritative and others are not authoritative.

(b) Verbal cognition (*śābdajñāna*) is the knowledge of the meaning of a sentence. Its efficient instrument (*karana*) is sentence (*śabda*).

Here ends the chapter on verbal testimony.

Thus valid experience (*yathārthānubhava*) has been explained.

41—T

(a) Erroneous experience is of three kinds—the three varieties being doubt, misapprehension and indirect argument (*reductio ad absurdum*).

(b) A doubt is a cognition which relates to several incompatible attributes in the same thing—as, in the



CSL

A PRIMER OF INDIAN LOGIC [PART III]

dubitative cognition—"It may be a post or a man".

(c) Misapprehension is a false cognition—as in the erroneous cognition of a nacre, in the form—"This is silver".

(d) Indirect argument (*reductio ad absurdum*) consists in the hypothetical admission of *vyāpya* (an invariably concomitant fact) which leads to the admission of the pervasive concomitant (*vyāpaka*); as, "If there were no fire, there would be no smoke".

42—T

Recollection is also of two kinds:—true and false. The former is the result of a valid experience; and the latter arises from an erroneous experience.



In this connection students may be advised to read again pages 134 to 189 of chapter I part III.

43—T

(a) Pleasure is a quality which all consider agreeable.

(b) Pain is a quality which all consider disagreeable.

(c) Desire is *wish*.

(d) Dislike is *ill-feeling*.

(e) Volitional effort is *the will to do*.

(f) *Dharma* is the unseen spiritual benefit accruing from the performance of actions which are enjoined by the Vedic law.

(g) *Adharma* is the unseen spiritual demerit accruing from the performance of forbidden actions.

(h) Cognition and the following seven qualities (eight in all) are the specific



type of generality. *Substance-ness* and such others are less comprehensive.

46—T

Specialities are the differentiating features belonging to eternal substances.

47—T

Inherence is the eternal relation, which belongs to the inseparables. An *inseparable* pair consists of two things of which one thing, so long as it does not come to an end, exists only in the other thing:—as *component part* and the *composite whole*, *quality* and *substance*, *motion* and *moving body*, *generality* and the *individual having it*, and *speciality* and the *eternal substance having it*.

In this connection, students will do well to read again pages 22 to 47 of chapter I part III.



48—T

(a) Antecedant non-existence has no beginning but has an end. It relates to the period preceding the production of an effect.

(b) Annihilative non-existence has a beginning but has no end. It relates to the period subsequent to the production of an effect.

(c) Total non-existence is the negation of a counter-correlative in respect of relation to all the three times—present, past and future—as in the statement—“There is no jar on this spot”

(d) Reciprocal non-existence is the negation of a counter-correlative in respect of its identity with an other thing—as in the statement—“A jar is not a cloth”.



qualities (*viśeṣaguṇāḥ*) found only in the soul. Cognition, desire and volitional effort may be eternal or non-eternal; they are eternal in God and non-eternal in the ordinary souls of living beings (*jīva*).

(i) There are three kinds of tendencies or impressions—speed, reminiscent impression and elasticity. Speed belongs to the substances—earth, water, fire, air and mind. Reminiscent impression belongs only to the soul and it results from a previous experience and causes recollection. Elasticity is the tendency of a thing to recover its original form when it is changed.

Here ends the section dealing with qualities.



It would be useful if students read again, in this connection, pages 15 to 19 of chapter I part III.

44—T

Activity is of the nature of motion. Upward motion leads to contact with an upper place. Downward motion leads to contact with a lower place. Contraction leads to contact with a place near one's body. Expansion leads to contact with a place remote from one's body. All the other varieties of motion come under 'going'.

45—T

Generality is a generic attribute which is *eternal* and *one* and inheres in many things. It is found in substances, qualities and activities. Existence (*sattā*) is the most comprehensive



CSL

346 A PRIMER OF INDIAN LOGIC [PART III

Here, students should peruse again pages 47 to 66 of chapter I part III.

49—T

All the other *padārthas* may be brought under one or the other of the seven *padārthas* enumerated at the beginning of this work. So, there are only seven categories.

Here, attention is drawn to pages 1 to 10 of chapter I part III.

50—T

Annambhaṭṭa has written this treatise called *Tarkasamgraha*, with the object of introducing beginners to a study of the Nyāya and Vaiśeṣika systems of Gautama and Kaṇāda.

THUS ENDS THE TARKASAMGRAHA.

SANSKRIT GLOSSARY

- akhaṇḍadeśa: indivisible space.
 akhaṇḍopādhi : an attribute which is not a jāti but similar to it.
 akhyāti: non-apprehension.
 acit: non-spirit; matter.
 aṇu: atom; minute part.
 aṇutva: smallness.
 aṇuparimāṇa: atomic size.
 atideśavākya: assimilative proposition.
 ativyāpti: over-applicability; being too wide.
 atyantābhāva: absolute non-existence.
 atyantāsat: non-being out-and-out.
 adharma: unseen spiritual demerit.
 adhikārin: a qualified person or one to whom the result accrues.
 adhiṣṭhāna: real substratum.
 adhyavasāya: determinative cognition.
 anavasthā: endless regression.
 anātman: non-soul.
 anādi: without beginning.
 anitya: non-eternal.
 anityadoṣa : occasional defect.

A PRIMER OF INDIAN LOGIC

- anirvacanīyakhyāti: indefinable's apprehension.
 anirvacanīyatā: indefinability.
 anudbhūta: sub-perceptional.
 anupasaṁhārin: non-conclusive reason.
 anubhava: experience.
 anumāna: inference; instrument of inference.
 anumiti: inference.
 anuyogin: correlated substratum.
 anuvyavasāya: after-cognition, in which the subject
 also is presented.
 anuṣṇāśīta: lukewarm.
 antaḥkaraṇa: inner instrument of knowledge.
 antyaviśeṣa: ultimate particularity.
 anyathākhyāti: misapprehension.
 anyathāsiddha: dispensable antecedent.
 anyonyābhāva: reciprocal negation; mutual non-
 existence.
 anvayadr̥ṣṭānta: affirmative example.
 anvayasahacāra: sequence of positive factors.
 anvayavyatirekin: concomitant in affirmation and
 negation.
 anvayavyāpti: positive or affirmative concomitance.
 ap: water.
 apara: less comprehensive.
 aparatva: spatial or temporal proximity.
 apavarga: final emancipation.
 apekṣābuddhi: enumerative cognition.
 apratyakṣa: imperceptibility.



SANSKRIT GLOSSARY

349

CSL

- aprāmāṇya: error ; invalidity.
abhāva: non-existence.
abhidheya: denotable thing.
abhidheyatva: namability.
abhigāta: striking; a kind of contact producing sound.
abheda: identity.
abhyāsapratyaya: repetitional cognition.
ayathārtha: erroneous.
ayathārthānubhava: erroneous experience.
ayutasiddha: inseparable.
araṇi: tinder-stick.
artha: substance.
arthāpatti: presumptive testimony.
alaukika: extra-normal.
avakṣepaṇa: downward motion.
avacchedaka: delimiting.
avacchedya: delimited.
avacchinna: delimited.
avayava: member; member of a syllogism; component part.
avayavin: composite structure or product.
avinābhāva: invariable relation.
aviveka: non-discrimination.
avyapadeśya: non-verbal; unverbalisable.
avyāpti: partial inapplicability.
avyāpyavṛtti: non-pervasive.
aśakti: inability.



CSL

350

A PRIMER OF INDIAN LOGIC

- asat: non-being.
asatkhyāti: non-being's apprehension.
asamavāyikāraṇa: non-inherent cause.
asambhava: total inapplicability.
asādhāraṇa: special; uncommon strayer.
asādhāraṇadharmā : specific feature.
asiddha: un-established reason.
asurabhi: non-fragrant.
ākaraṇa: mine-born₁; born of the mine.
ākāṅkṣā: verbal expectancy ; syntactic expectancy.
ākāśa: ether.
ākāśatva: etherness.
ākuñcana: contraction.
āgama: verbal testimony.
ātman: soul.
ātmakhyāti: self-apprehension.
ātmāśraya: self-dependence.
ādarapratyaya: regardful cognition.
Āditya: Sun.
ānumānika: inferential.
āpta: trustworthy person; truth-teller.
āmla : acid.
āyोजना: concretion activity.
ārambhavāda: creationistic theory of causation.
āropa: hypothetical admission.
āśrayāsiddha: unestablished in respect of abode.
icchā: desire.
īndriya: sense-organ.



- indriyatva: senseness.
indriyārthasannikarṣa: relation between sense-organ and object.
indhana: fuel.
Īśvara: God.
utkṣepaṇa: upward motion.
utpatī: production.
udāharaṇa: exemplification.
uddeśa: enumeration.
uddeśya: subject.
udbhūta: perceptible; not sub-perceptual.
upanaya: subsumptive correlation.
upamāna: instrument of assimilation ; assimilative instrument; comparison.
upamiti: assimilative cognition or experience.
upalabdhi: apprehension.
upaṣṭambhaka: supportive.
upasthiti: thought.
upādānakāraṇa: material cause.
upādhi: adventitious condition; an attribute which is not a jāti.
upekṣā: indifference.
uṣṇa: hot.
uṣṇasparśa: hot touch.
eka: one.
audarya: that of the stomach; gastric.
kaṭu: pungent.
kadamba: a kind of flower.



CSL

352

A PRIMER OF INDIAN LOGIC

kapāla: potsherd.

kapiśa: brown.

kampana: shaking.

karaṇa: efficient or instrumental cause.

karma: activity.

kalaśatva: jar-ness.

kalpanā: presumptive knowledge ; fictitious fabrication.

kaṣāya: astringent.

kāma: wish.

kārya: product.

kāla: time.

kālikasambandha: time-relation.

kṛtakatva : producibility.

kṛti: volitional effort.

kr̥ṣṇatārā: dark pupil.

kevalabhūta: empty floor.

kevalavyatirekin: concomitant in negation alone.

kevalādhikaraṇa: mere container.

kevalānvayin: concomitant in affirmation alone.

kriyā: activity.

kriyātva: motion-ness.

krodha: ill-feeling.

kṣaṇa: moment.

kṣaṇikavijñāna: momentary consciousness.

gandha: smell.

gamana: going.

guṇa: quality.



gurutva: weight.

ghaṭatva: potness.

ghrāṇa: olfactory sense; sense of smell.

cakṣus: visual sense; sense of sight.

calana: motion.

cit: spirit; consciousness.

citra: variegated.

cūrṇa: powder.

chala: dialectic quibbling.

janya: producible thing.

japā: China rose.

jala: water.

jalpa: argument for victory ; successful advocacy.

jāti: generic or class attribute; specious and un-
availing objections or futile response.

jihvā: tongue.

jīva: individual soul.

jīvātman: individual soul.

jñapti: knowledge.

Jñāna: knowledge.

jñeya: knowable thing.

tattvādhyavasāya: conclusive determination of truth.

tadutpatti: causality.

tantu: thread.

tamas: darkness.

tarka: *reductio ad absurdum*; indirect argument.

tādātmya: complete identity.

tikta: bitter.



CSL

354

A PRIMER OF INDIAN LOGIC

turī: shuttle.

tr̥ṇa: straw.

tejas: light; fire.

trasareṇu: triad ; ternary product.

truṭi: triad ; ternary product.

tvak: *tactus*; sense of touch.

daṇḍa: stick.

dik: spatial direction.

divya: that of the sky.

dīrgha: long.

duṣṭahetu: defective probans.

duḥkha: pain.

dr̥ṣṭānta: typical instance.

dravatva: fluidity.

dravya: substance.

dravyatva: substanceness.

dvyāṇuka: dyad ; binary product.

dveṣa: dislike.

dharma: merit; unseen spiritual benefit; attribute.

dharmin: thing qualified.

dhātu; verbal root.

dhṛti: sustaining effort.

dhvani: noise.

nāman: name.

nigamana: conclusion.

nigrahassthāna: vulnerable point.

nitya: eternal.

nityadoṣa: permanent defect.



SANSKRIT GLOSSARY

CSL
355

- nityaguṇa: eternal quality.
nididhyāsana: constant meditation.
nimittakāraṇa: instrumental cause.
niyata: invariable.
niyatapūrvavṛtti: invariable antecedent.
nirūpaka: correlating ; correlated.
nirṇaya: decisive knowledge.
nirvacana: definite predication.
nirvikalpaka: indeterminate.
niścaya: determination.
niṣkampapravṛtti: unfaltering effort.
nīla: blue.
nodana: pushing.
naimittika: artificial.
pakṣa: minor term; subject.
pakṣatā: subjectness.
pakṣadharmatā: subject-adjunctness.
paṭa: cloth.
paṭatva: clothness.
paṭupratyaya: vivid cognition.
padārtha: category.
para: more comprehensive.
paratva: temporal or spatial remoteness.
paratastva: extrinsicity.
parataḥprāmāṇya: theory of extrinsic validity.
paratogrāhya: made out extrinsically.
paramāṇu: atom.
Paramātman: Supreme Soul.

A PRIMER OF INDIAN LOGIC

- paramparāsambandha: indirect relation.
 parāmarśa: subsumptive reflection.
 parārthānumāna: inference for others.
 parārdha: one thousand crores of crores.
 pariṇāma: modification; digesting.
 parimāṇa: size.
 parīkṣā: investigation.
 parokṣa: non-perceptual.
 pāka: heat; baking.
 pācaka: a cook.
 pārīmāṇḍalya: the smallest size conceivable; atomic size.
 pāṣāṇa: stone.
 piṇḍa: lump.
 pīta: yellow.
 puruṣa: spirit.
 pr̥thaktva: separateness.
 pr̥thivī: earth.
 pr̥thvī: earth.
 prakāra: adjunct.
 prakāratā: adjunctness.
 prakāśa: luminosity.
 prakṛti: primordial matter.
 pracaya: loose contact.
 pratijñā: thesis.
 pratipādyapratipādakabhāva: relation of the treated and the treatise.
 pratibandhaka: counter-agent.



SANSKRIT GLOSSARY

- pratiyogin: correlative; counter-correlative.
pratiyogitā: correlativeness.
pratiyogitātva: the state of being correlativeness.
pratyakṣa: perception ; perceptive instrument.
pradhvīnsābhāva: annihilative non-existence.
pramā: valid knowledge.
pramāṇa: means of valid knowledge; valid knowledge.
pramātva: validity.
prameya: object of valid knowledge; cognisable thing.
prameyatva: knowability.
prayatna: volition.
prayojana: purpose; aim.
pralaya: dissolution; universal dissolution.
pravṛtti: volitional decision.
prasāraṇa: expansion.
prāgabhāva: antecedent non-existence.
prātyakṣika: perceptual.
prāmāṇya: truth ; validity.
pretyabhāva: cycle of death and birth.
phala: result.
phalibhūtajñāna: resultant cognition.
baddha: bound.
bādhakapratīti: sublating cognition.
bādhita: stultified reason.
buddhi: cognition.
bhāvakārya: positive product.

- bhāvanā: reminiscent impression.
 bhāvapadārtha: existent entities.
 bhāsvara: brilliant.
 bhitti: wall.
 bhūta: elemental being.
 bhūtatva: elementness.
 bhūyodarśana: repeated observation.
 bheda: difference.
 bhedasahiṣṇu: compatible with difference.
 bhauma: that of the earth.
 maṇi: lens.
 madhura: sweet.
 manas: mind.
 manana: reflective thinking.
 manuṣyatva: humanity.
 mahat: large.
 mahattva: largeness.
 mahākāla: undivided time.
 mahāsāmānya: grand generality; the *summum*
genus.
 māna: measurement.
 mānasapratyakṣa: mental perception.
 mithyā: unreal.
 mithyājñāna: false cognition.
 mukti: final emancipation.
 mūrta: moving substance; limited in size.
 mṛgatva: beasthood.
 mṛt: clay.



- yatna: volitional effort.
yathārtha: real.
yogyatā: congruity.
yogyānupalabdhi: effectual non-cognition.
rakta: red.
rajas: passion.
rasa: taste.
rasana: sense of taste; gustatory sense.
rūpa: colour.
rūpatva: colourness.
lakṣaṇa: definition.
lavaṇa: salt.
lāghava: principle of parsimony or economy.
liṅga: probans; mark; reason.
liṅgaparāmarśa: subsumptive reflection of the probans.
loka: world.
Varuṇa: Water-God.
varṇa: alphabet.
vahni: fire.
vākyaṛthabōdha : verbal judgment.
vāda: argument for truth.
vāyu: air.
vāyuloka: world of Wind God.
vikalpa: fictitious fabrication.
vijñāna: consciousness.
vitaṇḍā: destructive argument or objection.
vidyut: lightning.
vidheya: predicate.

- vipakṣa: counter-example.
 viparītakhyāti: contrary experience.
 viparyaya: misapprehension.
 vibhāga: division; disjunction.
 vibhāgaja: caused by disjunction.
 vibhudravya: all-pervasive substance.
 viruddha: adverse probans or reason.
 viśiṣṭapratīti: determinate cognition.
 viśeṣa: particularity.
 viśeṣagaṇa: specific quality.
 viśeṣaṇa: adjunct.
 viśeṣyatā: substantiveness.
 viśaya: object; subject-matter.
 viśayatā: objectness.
 viśayatātva: the state of being objectness.
 viśayitā: subjectness.
 vṛkṣa: tree.
 vṛtti: activity; modification.
 vega: speed.
 vemaṇ: loom.
 vyakti: individual unit.
 vyañjanā: suggestion.
 vyatirekadr̥ṣṭānta: negative example.
 vyatirekavyāpti: negative concomitance ; negative
 generalization.
 vyatirekasahacāra: concomitance of negation.
 vyavasāya: cognition, in which an object is present-
 ed and not the subject.



- vyāpāra: activity ; intermediate cause.
vyāpti: co-extension, invariable concomitance.
vyāpyatvāsiddha: unestablished in respect of its
concomitance.
vyāpyavṛtti: pervasive.
vyāvartaka: differentiating feature.
vyāvṛtti: differentiation.
vyāsajyavṛtti: partially contained.
śakti: significative potency or power; potentiality.
śabda: proposition; verbal testimony; sound.
śabdaja: caused by sound.
śabdatanmātra: subtle sound.
śabdavṛtti: significative force.
śarīra: body; form.
śābda: verbal; verbal experience.
śābdajñāna: verbal cognition.
śābdabodha: verbal cognition.
śīta: cold.
śītasparśa: cold touch.
śukti: nacre.
śukla: white.
śyāma: black.
śravaṇa: understanding.
Śruti: Revealed Texts.
sakampappravṛtti: halting effort.
sākṛddarśana: single observation.
sat: being.
sattā: existence.

- sattva: goodness.
 satpratipakṣa: opposable reason.
 sapakṣa: similar instance.
 samavāya: inherence.
 samavāyin: constitutive.
 samavāyikāraṇa: constitutive or inherent or intimate cause.
 samudra: ocean.
 samūhālabhāna: group cognition.
 saṁkhyā: number.
 saṁdigdha: doubtful probans.
 sannikarṣa: sense-relation.
 sannidhi: proximity.
 sambandha: relation.
 saṁyoga: conjunction.
 saṁyogaja: caused by contact.
 saṁśaya: doubt.
 saṁsarga: relation.
 saṁsargatā: relationness.
 saṁskāra: tendency or impression ; reminiscent impression.
 sarit: river.
 Sarvajña: Omniscient.
 savikalpaka: determinate.
 savyabhicāra: straying reason.
 sānta: having an end.
 sādṛśya: similarity.
 sādhana: middle term, probans.



SANSKRIT GLOSSARY

CSL
363

- sādhāraṇa: general; common strayer.
sādhya: probandum; major term.
sāmagrī: the whole causal apparatus.
sāmayikābhāva: temporary non-existence.
sāmānya: generality.
sāmānyaviśeṣa: generic differentia.
sāṁkarya: unwarranted blend.
sāmsiddhika: natural.
siddhānta: established conclusion.
sukha: pleasure.
surabhi: fragrant.
suvarṇa: gold.
sr̥ṣṭi: creation.
sthitasthāpaka: elasticity.
sneha: viscosity.
sparśa: touch.
sphatīka: crystal.
sphoṭa: the eternal substratum of significativeness.
smṛti: recollection.
smaraṇa: recollection.
svatastva: intrinsicity.
svatogrāhya: intrinsically made out.
svatojanya: intrinsically brought about.
svatovyāvartaka: self-discriminating.
svatovyāvṛtta: self-differentiated.
svarūpasambandha: self-relation, self-linking.
svarūpāsiddha: unestablished in respect of itself.
svārthānumāna: inference for oneself.



CSL

364

A PRIMER OF INDIAN LOGIC

svetarabheda: difference from the rest.

harita: green.

hetu: probans; reason; valid reason; middle term.

hetvābhāsa: fallacious reason; semblance of reason;

defective probans.

hrasva: short.

12